

Appendix D

Transportation Impact Analysis

TRAFFIC IMPACT STUDY

County of Los Angeles
San Gabriel Valley
Aquatics Center

635 North California Avenue
La Puente, CA

November 2021

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EXECUTIVE SUMMARY

This traffic study was prepared for the County of Los Angeles by KOA for the proposed San Gabriel Valley Aquatic Center. The following summarizes the traffic study results, conclusions, and recommendations:

- The project is the San Gabriel Valley Aquatic Center project, proposed by the County of Los Angeles on the Temple Academy School property in an unincorporated County area near the City of La Puente at 635 North California Avenue, La Puente.
- The project site is owned by the Hacienda La Puente Unified School District (HLPUSD). The County is planning to negotiate a ground lease with the HLPUSD to complete the project. The project site is bordered by Temple Academy school/North California Avenue on the southeast, East Temple Avenue to the southwest, residences/Evanwood Avenue to the northwest, and Allen J. Martin Park/East Giordano Street to the northeast.
- The proposed facility will provide a 10,800 square foot pool building, a large competitive swimming pool, a smaller practice pool, signage, fencing, bleachers, a new one-acre park area, central plaza, parking lot, and other site improvements.
- The main objective of the project is to construct a joint-use aquatics facility available for public use and to provide recreational opportunities to the local community. The proposed pools would provide for local residents to have an aquatics facility in closer proximity.
- The project would increase recreational opportunities for the local community, thereby reducing trips and vehicle miles traveled. The project would not result in new regional swim meets compared to what is already occurring.
- The traffic impact analysis methodology and data sources were defined by a project scoping document, submitted to the County of Los Angeles Department of Public Works (DPW) on February 25, 2021 and finalized on April 22, 2021.
- The project is anticipated to be completed and occupied within the year 2024.
- The project would generate a net total of 843 daily net trips, including 51 vehicle trips during the weekday a.m. peak hour and 68 vehicle trips during the weekday p.m. peak hour. Weekend mid-day peak hour vehicle trips would be 31.

The project impact determinations are as follows, based on the analysis conducted and the application of the County traffic impact guidelines:

- The characteristics of this facility make the project impacts on VMT less than significant, per County guidelines requirements related to the California Environmental Quality Act (CEQA).
- By providing additional swimming facilities in the region, the County would increase recreational opportunities for the local community, thereby reducing trips and vehicle miles traveled for general swim facility use, practice, and regional meets.
- The project would not result in new practice activity and regional swim meets over the pattern of meets that is already occurring. In this manner, the proposed facility will not generate new regional vehicle trips.
- The project would reduce trips to other area swim facilities located further from the local area. Area VMT will therefore be reduced. The project will not substantially increase regional VMT in this manner, and therefore the project VMT impacts would be less than significant.
- The proposed project would not significantly affect local traffic circulation and access, based on a review of study area mobility conditions per County non-CEQA analysis requirements. The local traffic circulation effects of the project are determined to be nominal, and operational improvements are not recommended. The County will make timing adjustments in the future to accommodate queuing based on cumulative conditions.

1. INTRODUCTION

1.1 LEAD AND LOCAL AGENCY REVIEW

The analysis summarized in this report was completed based on the methodologies and procedures outlined in the County of Los Angeles Department of Public Works (DPW) *Transportation Impact Analysis Guidelines* dated July 23, 2020. This report presents the conclusions of the evaluation of CEQA and non-CEQA transportation impacts for the project.

The City of La Puente northern limits are located to the south of the project site, and some of the study area intersections are located within or on the boundary of the City. The City of La Puente was contacted during project scoping efforts, to share planned study area and methodology details, and the City accepted the scoping document. The City by policy applies the County guidelines to traffic studies, so the County guidelines are used in this document for the review of potential project impacts by both the City of La Puente and the County of Los Angeles.

A scoping document for this study was submitted to DPW on March 26, 2021 and finalized on April 17, 2021. Four intersections were defined as the study area, and the finalized document is provided in Appendix A.

1.2 PROJECT DESCRIPTION

The San Gabriel Valley Aquatic Center project is proposed by the County of Los Angeles on the Temple Academy School property in an unincorporated County area near the City of La Puente at 635 North California Avenue, La Puente. The Assessor's ID is 8212-011-901. The planned opening year is 2024.

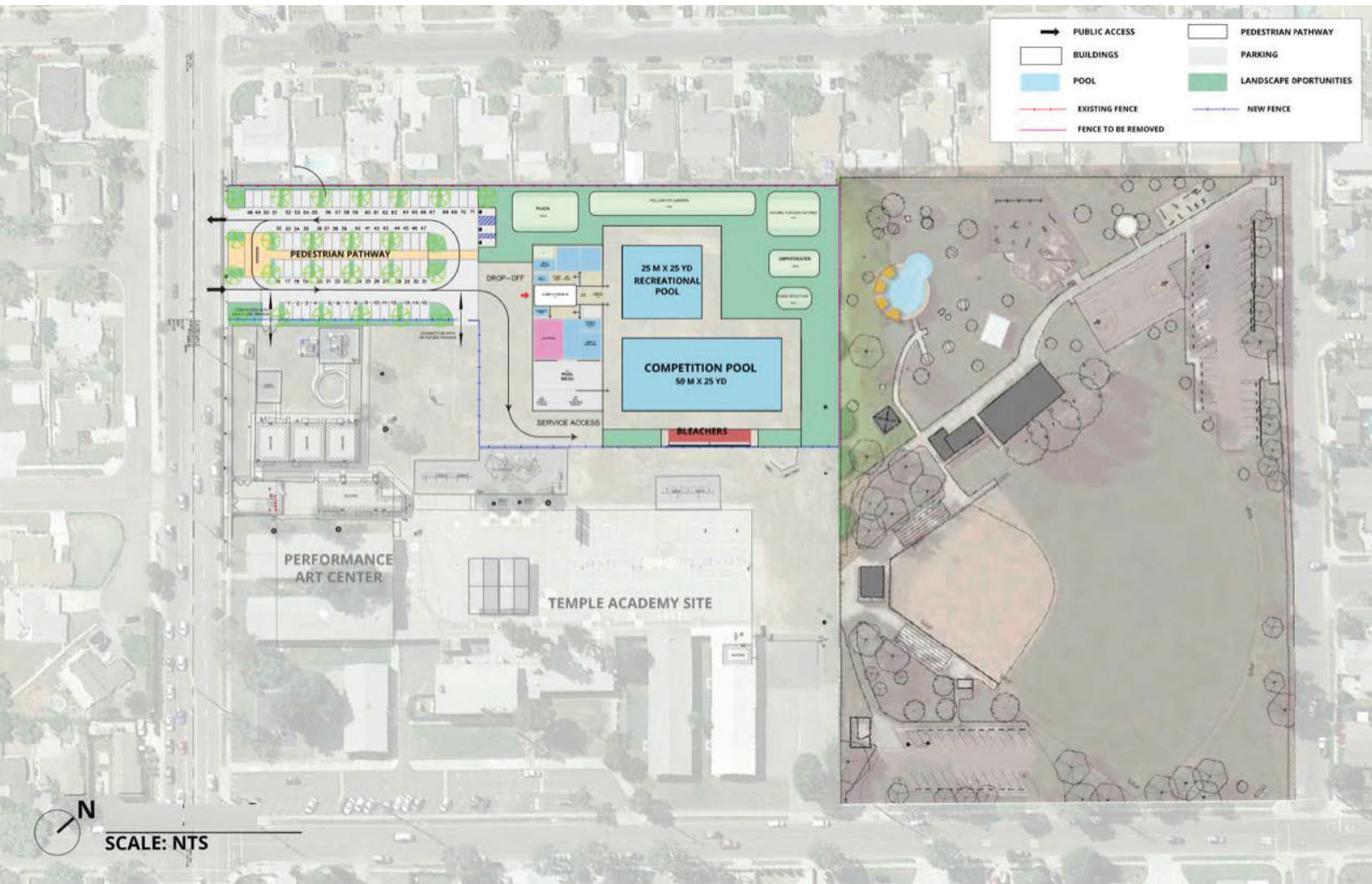
The school is part of the Hacienda La Puente Unified School District (HLPUSD). The County is planning to negotiate a ground lease with the HLPUSD to complete the project. The project site is bordered by Temple Academy school/North California Avenue on the south, East Temple Avenue to the west, residences/Evanwood Avenue to the north, and Allen J. Martin Park/East Giordano Street to the east. The new aquatic facility will be placed in an area currently used as a play field and a parking lot at the corner of East Temple Ave and Evanwood Avenue. The facility will include a 10,800 square foot pool building, a large competitive swimming pool, a smaller practice pool, signage, fencing, bleachers, a new one-acre park area, central plaza, parking lot, and other site improvements.

The proposed project site plan is provided on Figure 1.

The proposed primary site access will be on Temple Avenue. The parking lot will be provided at the Temple Avenue side of the site, with all vehicular access via proposed inbound and outbound driveways on Temple Avenue. Gated access will be provided to the planned Performance Art Center to the south, for shared parking use during events.

FIGURE 1

County of Los Angeles - San Gabriel Valley Aquatics Center Project Site Plan



2. CEQA TRANSPORTATION IMPACT ANALYSIS

County of Los Angeles transportation guidelines for California Environmental Quality Act (CEQA) impacts are based on guidance from the State of California Office of Planning and Research for the assessment of vehicle miles traveled (VMT). County thresholds of significance and mitigation measure programs were considered for this analysis, as appropriate to the outcome of the VMT review for the project.

2.1 VMT ANALYSIS GUIDELINES

County guidelines for project VMT impacts are based on consistency with CEQA guidelines. Development projects are analyzed to determine if and how much they reduce total VMT. Public Works guidance on screening and impact criteria was reviewed as part of the scoping process undertaken with the County for this project.

Screening Criteria Review

Two screening criteria were considered that relate directly to the project characteristics:

- Non-retail project trip generation screening criteria: Does the development project generate a net increase of 110 or more daily vehicle trips? If no, a less than significant CEQA impact determination can be made.
- Proximity to transit based screening criteria: Is the project located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor?

The proposed project is estimated to generate 843 trips on a daily basis, and therefore the first criterion cannot be applied. The project is not located near a major transit stop or a high-quality transit corridor, and therefore the second criterion cannot be applied.

A retail project screening criterion was not considered, as the proposed project is non-retail. An additional screening measure is for low-income housing uses, which also does not apply to the proposed project.

For typical land uses, a potentially significant VMT impact would occur when specific minimum criteria are exceeded. These include VMT per capita or VMT per employee for specific land use categories and land use plans. For the analysis of transportation impacts under CEQA, the Baseline VMT for the North and South areas of the County are defined by the guidelines.

Significant Impact Threshold

For projects that are not residential, office, regional serving retail, or land use plans, Public Works is to be contacted to determine the appropriate threshold of significance to be applied to the analysis. KOA coordinated with Public Works to define the project VMT analysis and the threshold to be applied. A quantified VMT analysis was not undertaken for this project, as the proposed project has characteristics that will not generate regional increases in VMT.

The impact threshold for the project was defined as no substantial increase in VMT. The review is discussed in more detail below.

2.2 VMT IMPACT REVIEW

No new swim/sports groups or leagues will be formed due to this facility development. Those local swimmers using the facility for practice will have a shorter distance to travel from the existing facilities that they are currently using. The presence of other existing similar pool facilities (in other locations) and how existing swimmers use these facilities was the basis for project VMT significance determinations.

The potential local circulation impacts of regional swim meets that may be relocated to the new facility are evaluated in the Special Events section of this report.

The main objective of the project is to construct a joint-use aquatics facility available for public use and to provide recreational opportunities to the local community. The community, the County, and the Hacienda La Puente Unified School District (HLPUSD) maintain a desire for a publicly accessible swimming facility at this location as well as park facilities to complement the adjacent Allen J. Martin Park.

The proposed facility pools would provide for local residents to have an aquatics facility in closer proximity. Existing swimmers in the project area typically travel to the California High School for regional meets, located approximately 7.5 miles to the south of the site. County-operated practice locations are located at Arcadia Community Regional Park (7.8 miles to the north of the site) and the Whittier Aquatics Facility (7.5 miles to the south). The proposed project will provide a location within the San Gabriel Valley that does not exist for regional meets, providing an additional area location. The proposed project will also provide a new practice and training location, closer to County residents in the south San Gabriel Valley area than the Arcadia or Whittier locations.

Figure 2 illustrates the proposed project location and the locations of nearby pools operated by the County of Los Angeles.

A comparison of the existing and proposed facilities is provided below:

- Arcadia Community Regional Park – The Norman S. Johnson Aquatic Center was completed in May 2012. The total building and pool facility area is 20,600 square feet, including the main building of 8,000 square feet.
- Whittier Aquatics Facility – Project environmental review was completed in 2019 and the facility is now open. The total building and pool facility area is 28,500 square feet, including a main building of 10,000 square feet.
- Proposed Project – The San Gabriel Valley Aquatics Center will be 29,255 square feet in area, including the main building of 10,800 square feet.

The Arcadia pool facility has a lower overall size in terms of floor area, although the main building is only 20 percent smaller than the Whittier and proposed SGV main project buildings. The Whittier and proposed Project sizes are very similar in terms of overall size and the main pool building size. Therefore, these existing and the proposed pool facilities can provide very similar functions and intensities of use. The proposed use complements the existing network of pools and reduces the average trip length for users across the local County area.

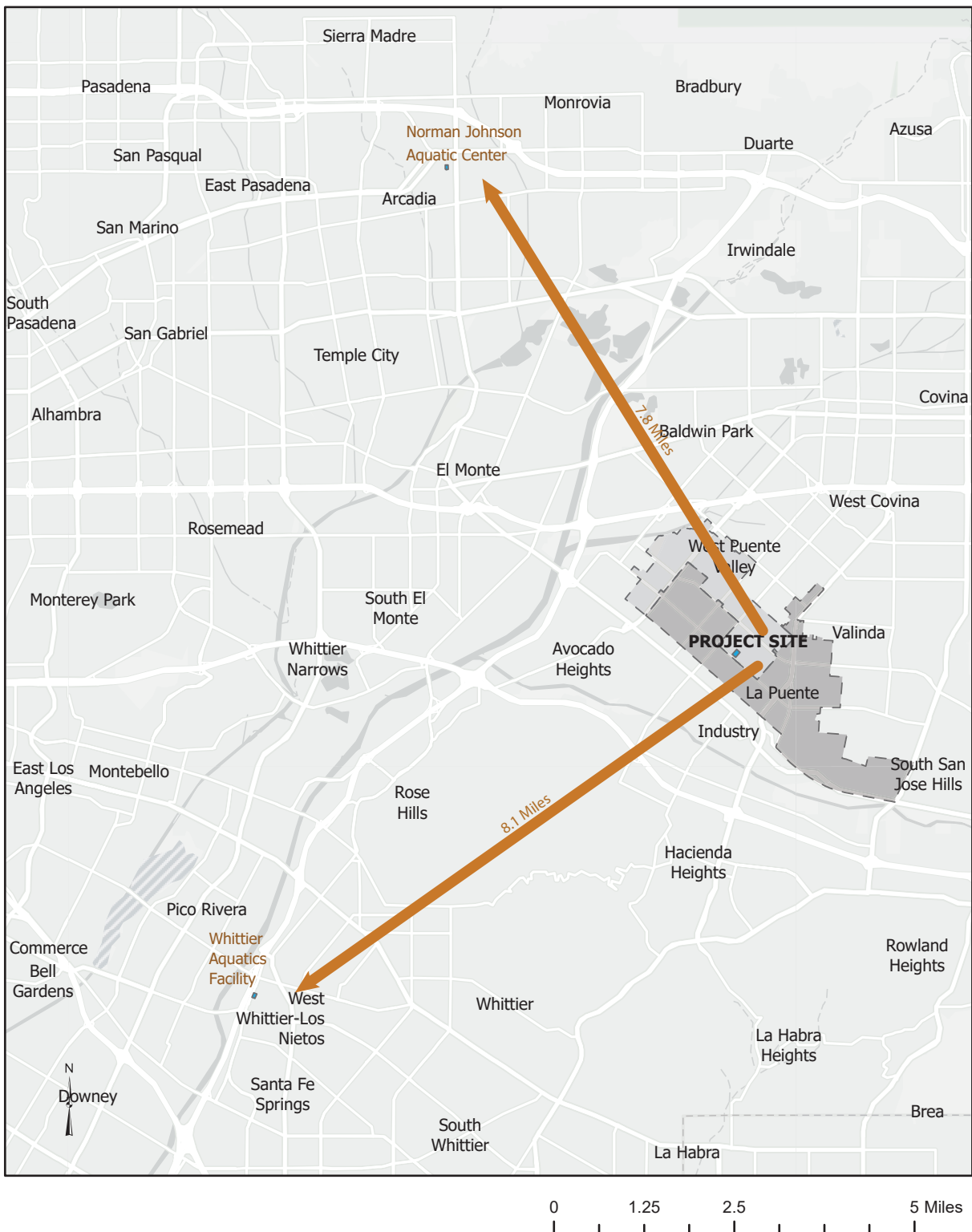
By providing additional swimming facilities in the region, the County would increase recreational opportunities for the local community, thereby reducing trips and vehicle miles traveled for general swim facility use, practice, and regional meets. The project would not result in new practice activity and regional

swim meets over the pattern of meets that is already occurring. In this manner, the proposed facility will not generate new regional vehicle trips.

It is anticipated that the project would reduce trips to these other facilities, as they are located further from the local neighborhood, and VMT will therefore be reduced for most trips to and from the proposed facility. The project will not increase regional VMT substantially, and therefore the project VMT impacts would be less than significant.

FIGURE 2

County of Los Angeles - San Gabriel Valley Aquatics Center Nearby LA County Maintained Swimming Pools



3. SITE ACCESS STUDY – OPERATIONAL ANALYSIS

In addition to the analysis of potential CEQA impacts, the County requires the analysis of potential local circulation impacts for proposed development projects. The determinations for this area of analysis are not tied to CEQA, and are focused on the County review of local effects of projects.

Based on the scoping process for this study, site access and circulation constraints must be reviewed, based on the number of daily project trips at 843, over the minimum threshold of 110 trips and the need for discretionary project action by the County Department of Regional Planning.

The County guidelines indicate that site access studies should address site access and circulation needs of vehicles, bicycles and pedestrians. The analysis area should include primary site access points, unsignalized intersections that provide project site access, and signalized intersections in the vicinity.

This section provides a summary of the local circulation review conducted for the proposed project. For purposes of conservative traffic analysis, a project completion year of 2024 has been assumed based on County project planning.

3.1 STUDY METHODOLOGY

To determine the effects of the project on the operation of vehicular travel within the immediate project vicinity, an evaluation was made of the project contribution to delay and queuing at intersections adjacent to and near the project site under existing and future conditions.

KOA coordinated with County staff as the first step in the traffic analysis, and provided an initial and revised scoping document to the County Department of Public Works, in order to define the study area and other major details.

The project study area includes the following four study intersections along the primary access routes to and from the site:

1. California Avenue/Amar Road
2. California Avenue/Giordano Street
3. Sunset Avenue/ Temple Avenue
4. California Avenue/Temple Avenue

Figure 3 illustrates the study area and the locations of the study intersections.

The availability of historical counts for existing conditions was researched with County Public Works, to define available data that could be applied to the analysis. This was done to best define typical traffic conditions that occur outside of recent periods of COVID-related restrictions on activity. A combination of new counts and historical counts was used. Existing pre-COVID counts available from the County and new volume counts at the study intersections were compared to determine if factoring should be applied to define typical volumes where direct comparison data was not available.

FIGURE 3

County of Los Angeles - San Gabriel Valley Aquatics Center Study Area



The County traffic guidelines state that an access analysis should focus on site ingress/egress and circulation needs of vehicles, bicycles, and pedestrians. The required quantitative evaluation includes a level of service and queuing analysis. Queuing is evaluated for pre-project and post-project conditions at turn pockets, at the project study intersections, and the driveway access point. The analysis determined if the project would cause queuing to block nearby intersections and other site driveways.

The analysis includes the evaluation of potential queuing at the inbound left-turn of the project Temple Avenue driveway as it will require turning from a travel lane in the eastbound direction. A Highway Capacity Manual analysis was conducted based on the project trip generation and the volumes analyzed at the nearby study intersection.

[Analysis Scenarios](#)

The study included the analysis of the following traffic scenarios:

- Existing
- Existing with-Project
- Future without-Project
- Future with-Project

Project trip generation was based on land use intensities and trip rates defined by *Trip Generation, 10th edition*, published by the Institute of Transportation Engineers (ITE). Project trip distribution percentages were defined based on the expected local travel routes to and from the facility.

The existing with-project conditions scenario was included to analyze project impacts without cumulative projects and annual ambient growth.

In order to account for traffic growth in the study area through the project opening year, an ambient/background traffic growth rate was applied to the traffic counts. Traffic from related projects (approved and pending developments) was also added to the study area. Based on the future without-project volumes plus traffic from the proposed project, the future with-project traffic volume conditions were determined and analyzed.

[Level of Service Methodology](#)

For analysis of Level of Service (LOS) at signalized intersections, the County has designated the Highway Capacity Manual (HCM) methodology as the desired tool. A facility is at capacity (delay of 80 seconds or greater) when extreme congestion occurs. This total vehicle approach delay output of the HCM is a function of hourly volumes, signal phasing, and approach lane configuration, and green time for each leg of the intersection.

Level of service values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating capacity of a roadway. Table 4 defines the level of service criteria applied to the study intersections.

Table 1 – Level of Service Definitions, Highway Capacity Manual Method

LEVEL OF SERVICE	GENERAL DEFINITION	Delay Per Vehicle (seconds)
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤10
B	VERY GOOD. An occasional approach phase is fully used; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 - 20
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	>20 - 35
D	FAIR. Delays may be substantial during portions of rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	>35 - 55
E	POOR. Represents the maximum vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	>55 - 80
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	>80

Special Analysis – Construction and Cut-Through Traffic

The County guidelines state that additional analysis tasks should be undertaken if requirements are met. These two areas are reviewed below based on the guidelines.

Construction Phase Analysis

This analysis as defined by the County guidelines will not be conducted, as project construction will not directly affect adjacent roadways. The project will not require major construction activities that require lane closures to take place within the right-of-way of adjacent roadways, nor would vehicle, bicycle, pedestrian access, or bus stop access on area roadways be physically restricted during project construction.

Therefore, it was determined that a construction phase analysis was not necessary for this project.

Local Residential Street Cut-Through Analysis

This analysis will not be conducted, as there are no identified Local Streets near the project site that would provide cut-through routes that are shorter than routes on collector or arterial roadways. The project is not expected to add vehicle trips to congested arterial street segments. The intersection of Sunset Avenue/Temple Avenue operates at LOS E or F as analyzed, but it is estimated that this would not cause neighborhood cut-through traffic due to multiple available arterial routes in the area that can be used for alternate travel, and the other study intersections do not operate at poor LOS.

Therefore, the project is not expected to add automobile traffic to alternative local residential roadways during peak hours and a cut-through analysis was not conducted.

3.2 EXISTING MOBILITY SYSTEM

This section describes the existing conditions within the study area in terms of roadway facilities, transit service, and traffic operating conditions.

All the roadway classifications are based on the County Master Plan of Highways. The key roadways within the study area are described here. The discussion is limited to specific roadways that traverse the study intersections and serve the project site.

[Amar Road](#) is classified as a Major Highway. This east-west roadway provides two travel lanes in each direction and a striped center median. On-street parking is generally prohibited on both sides of the roadway, and the posted speed limit is 40 mph.

[California Avenue](#) is classified as a Collector Street. This north-south roadway provides one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. The prima facie speed limit is 25 miles per hour.

[Giordano Street](#) is classified as a Collector Street. This east-west roadway provides one travel lane in each direction. On-street parking is generally permitted on both sides of the roadway. The prima facie speed limit is 25 miles per hour.

[Sunset Avenue](#) is classified as a Major Highway. This north-south roadway provides two travel lanes in each direction and a double-yellow striped median. On-street parking is generally prohibited on the west side of the roadway, and permitted on the east side of the roadway with the exception of Thursdays from 9 AM to 1 PM commercial vehicles, and a bike lane facility is provided on both sides of the roadway. The posted speed limit is 45mph.

[Temple Avenue](#) is classified as a Secondary Highway. This east-west roadway provides two travel lanes in each direction and a double-yellow striped median. On-street parking is generally permitted on the north side of the roadway, and prohibited on the south side of the roadway the posted speed limit is 40 mph.

Figure 4 illustrates the existing traffic controls and approach lane geometries at the study intersections.

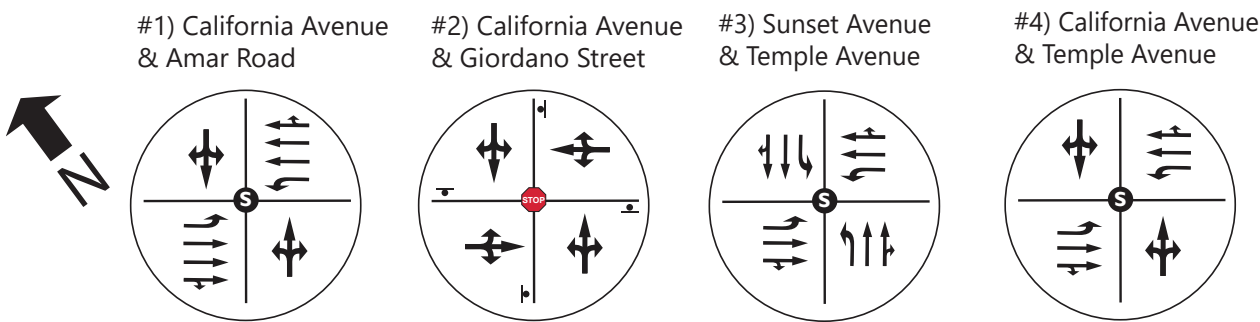
Transit service is provided within one-quarter mile radius from the proposed project site, which is operated by Foothill Transit. Table 2 summarizes the project study area transit service.

Table 2 – Existing Transit Service

Agency	Line	From	To	Via	Peak Frequency (approx.)
Foothill Transit	486	El Monte Station	Cal Poly Pomona	Amar Road	13 Minutes
Foothill Transit	281	Puente Hills Mall	Citrus College	Sunset Avenue	30 Minutes

Source: Foothilltransit.org

Figure 4 - Existing Study Intersection Lane and Control Configurations



LANE CONFIGURATION

- Signalized Intersection
- Stop Controlled Intersection
- Intersection Lane Geometry



3.3 EXISTING CIRCULATION CONDITIONS

The existing conditions analysis for the study area used both existing and historical counts. Existing traffic conditions were analyzed based on factoring of traffic counts from a comparison of current and past data, due to the current reduced traffic levels caused by COVID-19 related activity restrictions.

Traffic data was compiled from a combination of current year-2021 counts collected in the field by National Data and Surveying Services (NDS) and historical year-2018 counts obtained from the County Department of Public Works.

The recent counts were conducted on Thursday, May 06, 2021 during the peak timeframes of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The year-2018 counts used for comparison calculations were conducted on February 05, 2018, with volumes overlapping the same timeframes.

In order to define existing traffic conditions, counts taken in 2021 were compared with historical traffic counts taken in 2018. Historical data was available from the County at the intersection of California Avenue and Giordano Street. Comparison ratios for the AM and PM peak hours from data at this location was applied to the other three intersection count locations, to increase the volume values to the expected normal volume levels. As the previous counts at this location were higher than the new counts, the previous but higher volume counts were used for the California Avenue and Giordano Street location, with a one percent per year growth factor to provide conservative values.

A ratio was then defined based on the difference of the two sets of comparison volumes, and input volumes were then adjusted to reflect pre-pandemic volumes and operations. For the AM factoring, an increase of 54.3 percent was applied. For the PM factoring, an increase of 30.2 percent was applied.

The overall traffic count data set after factoring was used to define existing traffic conditions. Fieldwork within the study area was undertaken to identify the condition of key study area roadways, including traffic control and approach lane configurations at each study intersection and on-street parking restrictions.

Based on the intersection lane configurations and the existing traffic volumes, average vehicle delay and corresponding levels of service (LOS) were determined for each of the study intersections during the weekday a.m. and p.m. peak hours for existing conditions. The existing with-project traffic volumes were derived by adding project trips to the existing traffic volumes.

Table 3 provides the operations analysis results for the existing conditions scenario, with vehicle delay in seconds and LOS values at the study intersections.

Table 3 – Existing Intersection Operations

Study Intersections		AM Peak		PM Peak		Saturday	
		Delay	LOS	Delay	LOS	Delay	LOS
1	California Avenue and Amar Road	26.2	C	53.3	D	38.2	D
2	California Avenue and Giordano Street*	7.8	A	9.8	A	8.5	A
3	Sunset Avenue and Temple Avenue	67.0	E	92.3	F	58.0	E
4	California Avenue and Temple Avenue	33.40	C	36.3	D	31.6	C

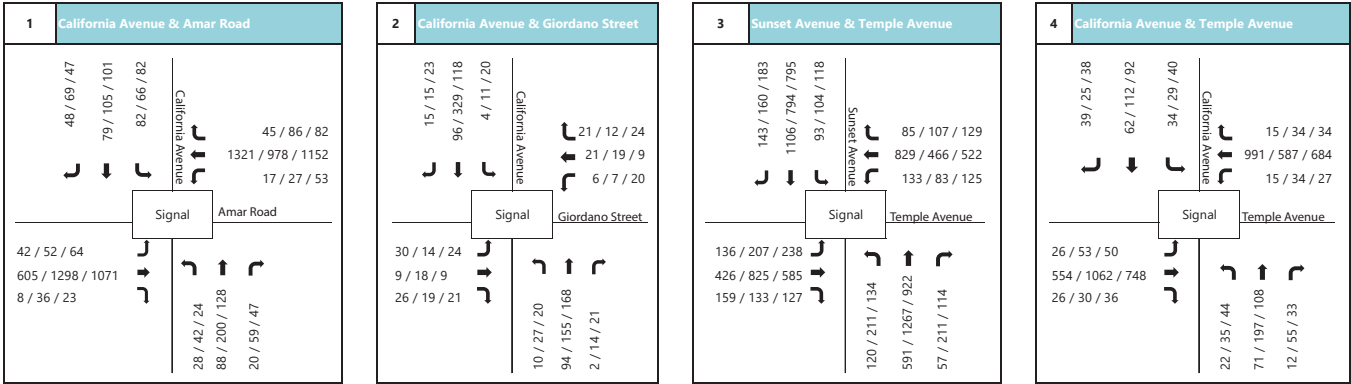
LOS = Level of Service; HCM delay per average vehicle

*Stop-controlled intersection

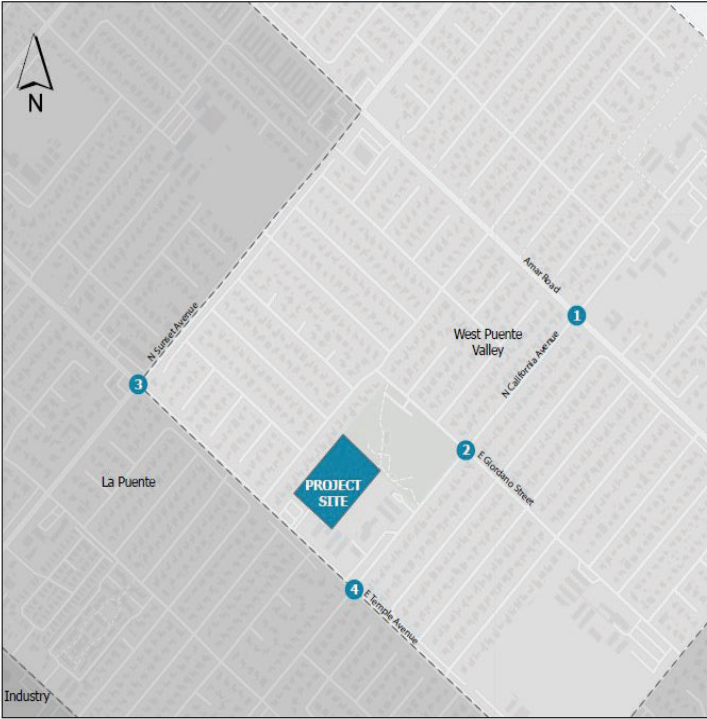
The study intersection of Sunset Avenue/Temple Avenue operates at LOS E in the AM peak period and at LOS F in the PM peak period. The other study intersections operate at LOS D or better during the peak hours.

The existing weekday a.m. peak-hour and p.m. peak-hour traffic turning movement volumes are illustrated on Figure 5. The traffic count data sheets are provided in Appendix C, and the existing traffic analysis scenario worksheets are provided in Appendix D.

Figure 5 - Existing AM/PM Peak Hour Traffic Volumes



XX/XX AM/PM/SAT Peak Hour Traffic Volumes



3.4 PROJECT TRAFFIC

This section defines the traffic generated by the proposed project in a three-step process, including trip generation, trip distribution, and trip assignment.

The project will include a 10,800 square-foot pool building, and competitive and practice pools. The combined area of these elements is 29,255 square feet. Institute of Transportation Engineers (ITE) rates from *Trip Generation, 10th edition* for the recreational community center land use category. This category of trip rates was applied to the project as it represents a generally similar use to the typical daily activity expected at the proposed facility.

The total estimated weekday daily project vehicle trip total is 843, as calculated in Table 4. This includes 51 AM peak hour trips and 68 PM peak hour trips. Saturday mid-day peak-hour trips would be 31.

Table 4 – Project Trip Generation

Land Use ¹	Intensity	Units ²	Daily Total	Weekday AM Peak			Weekday PM Peak			Saturday Mid-Day		
				Total	In	Out	Total	In	Out	Total	In	Out
Trip Generation Rates												
Recreational Community Center (ITE 495)	-	KSF	28.82	1.76	66%	34%	2.31	47%	53%	1.05	53%	47%
Trip Generation Estimates												
Proposed Pool Project	29.2547	KSF	843	51	34	17	68	32	36	31	17	14
Total			843	51	34	17	68	32	36	31	17	14

Project Trip Distribution

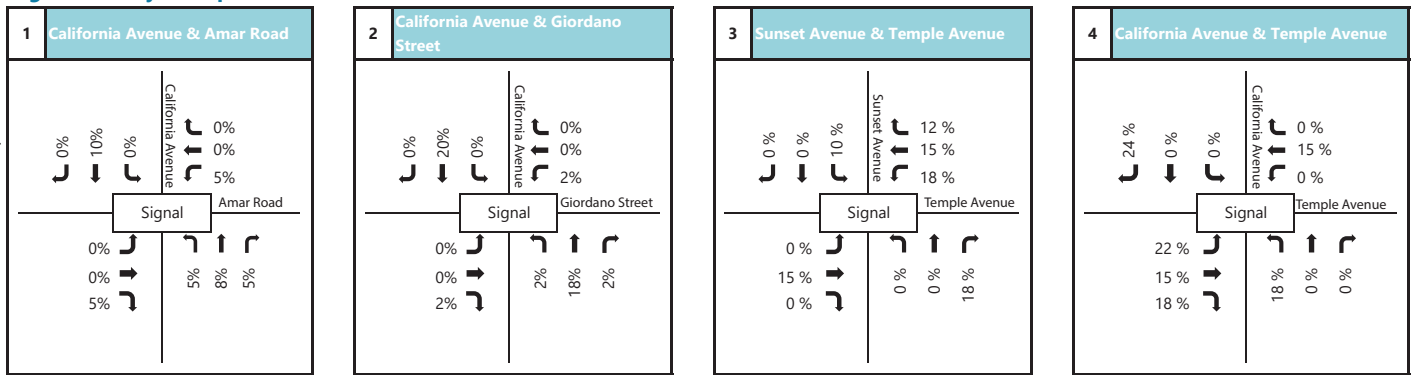
Trip distribution is the process of assigning the directions from which traffic will access the project site. Trip distribution is dependent upon the land use characteristics of the project, the local roadway network, and the general locations of other land uses to which project trips would originate or terminate.

Figure 6 illustrates the trip distribution percentages that were utilized for the project traffic.

Project Trip Assignment

Based on the trip generation and distribution assumptions described above, project traffic was assigned to the roadway system. The peak hour project trip assignment is illustrated on Figure 7.

Figure 6 - Project Trip Distribution



XX% Project Trip Distribution

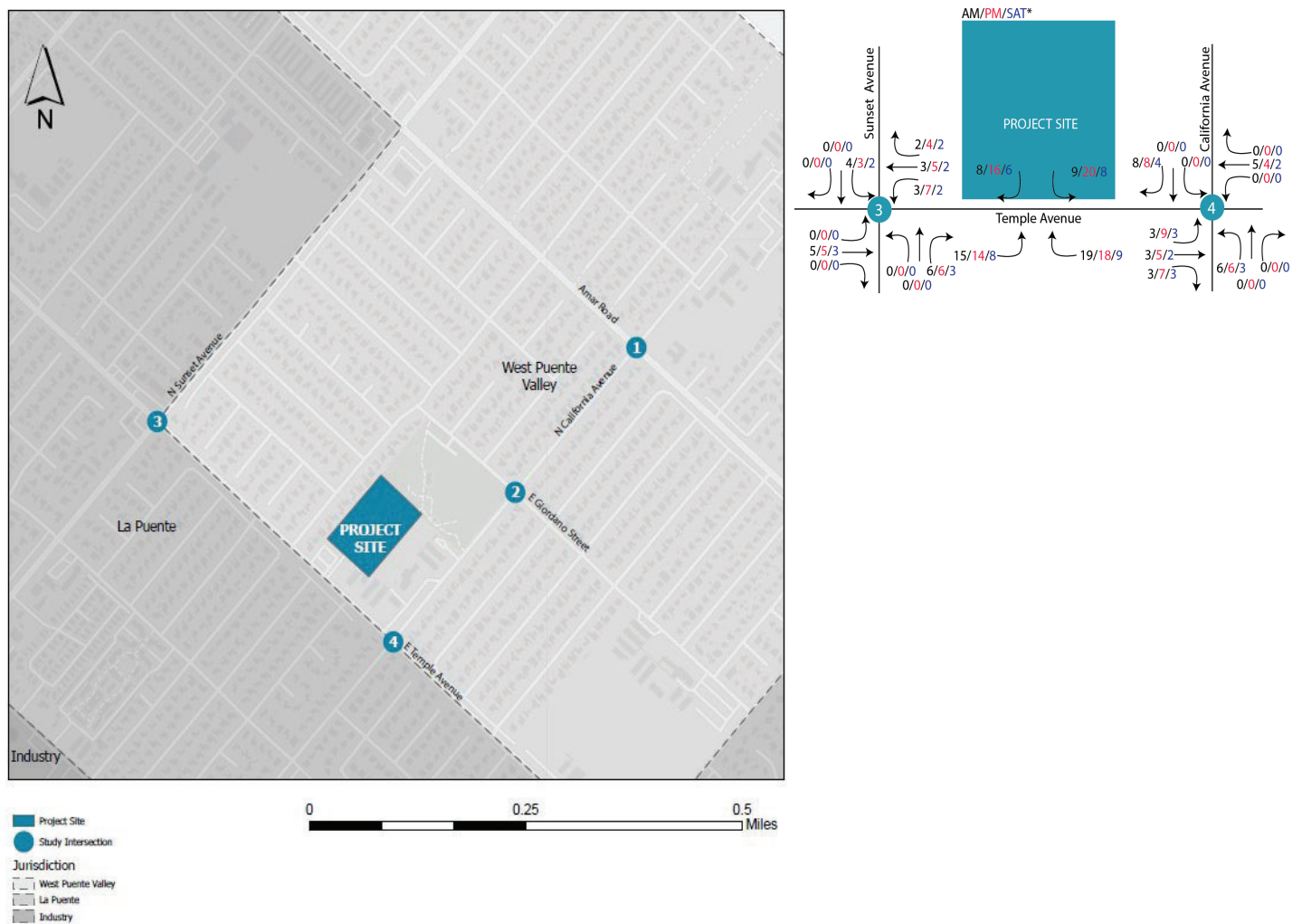
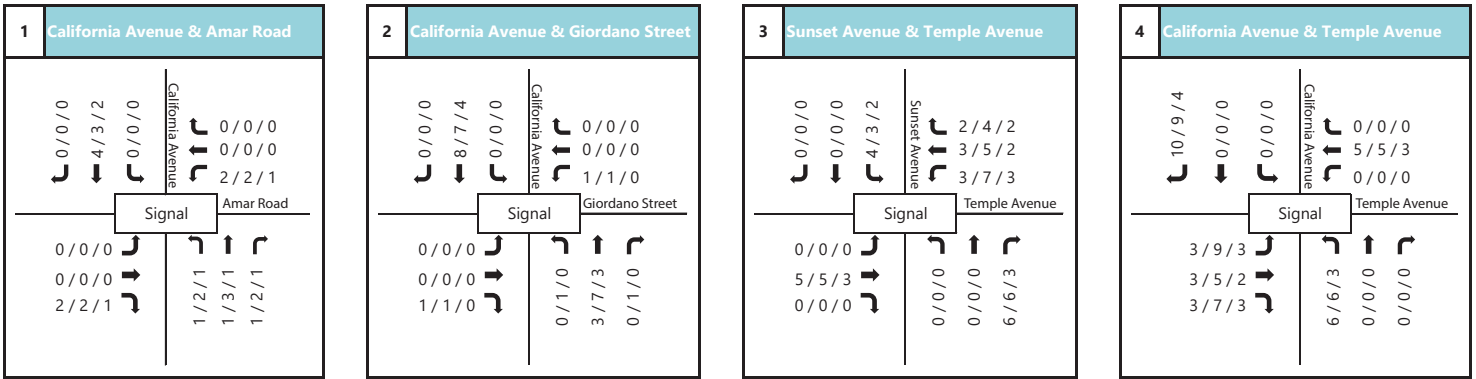
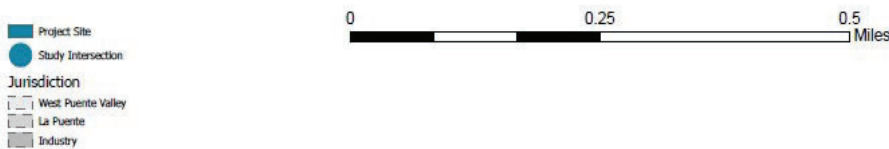
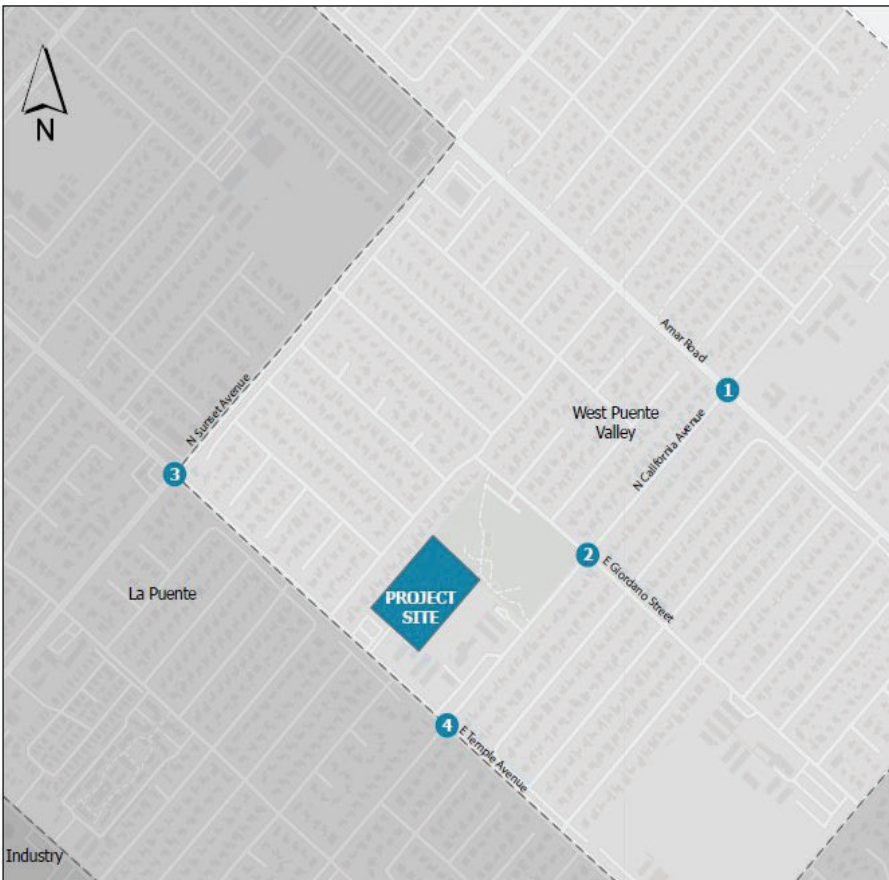


Figure 7 - Project Trip Assignment - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



3.5 EXISTING WITH -PROJECT CONDITIONS

The existing conditions scenario traffic volumes were analyzed with the addition of proposed project trips. Table 5 provides a summary of study intersection operations for existing with-project conditions.

Table 5 – Existing with-Project Intersection Delay and Performance

Study Intersections		Peak Hour	Existing Conditions		Existing with Project	
			Delay in Sec.	LOS	Delay in Sec.	LOS
1	California Avenue and Amar Road	AM	26.2	C	27.4	C
		PM	53.3	D	56.0	E
		SAT	38.2	D	38.7	D
2	California Avenue and Giordano Street*	AM	7.8	A	7.9	A
		PM	9.8	A	10.0	A
		SAT	8.5	A	8.5	A
3	Sunset Avenue and Temple Avenue	AM	67.0	E	67.1	E
		PM	92.3	F	93.0	F
		SAT	58.0	E	58.1	E
4	California Avenue and Temple Avenue	AM	33.4	C	33.5	C
		PM	36.3	D	36.6	D
		SAT	31.6	C	31.7	C

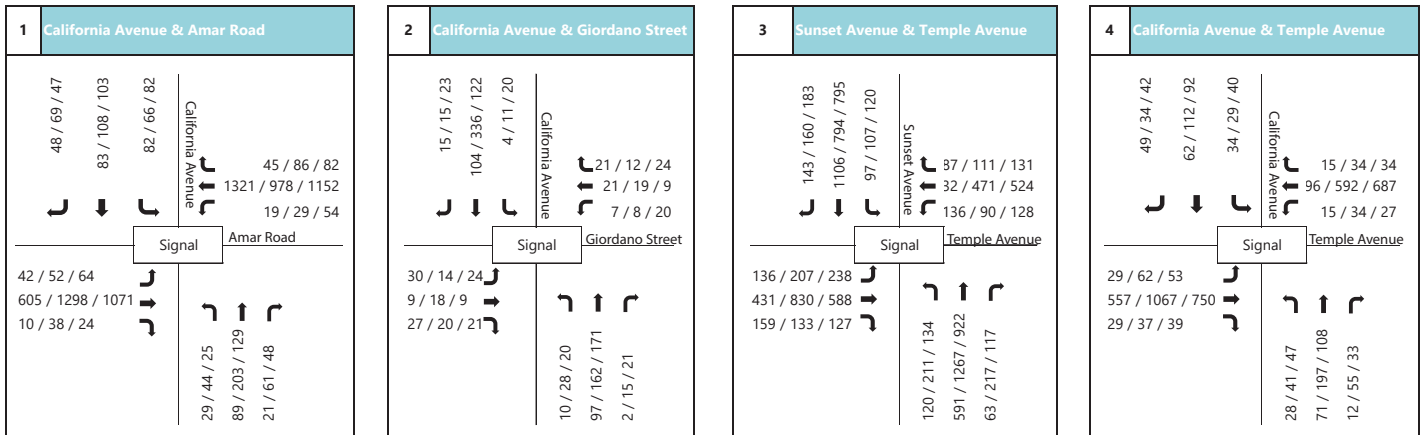
LOS = Level of Service; HCM delay per average vehicle

*Stop-controlled intersection

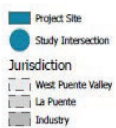
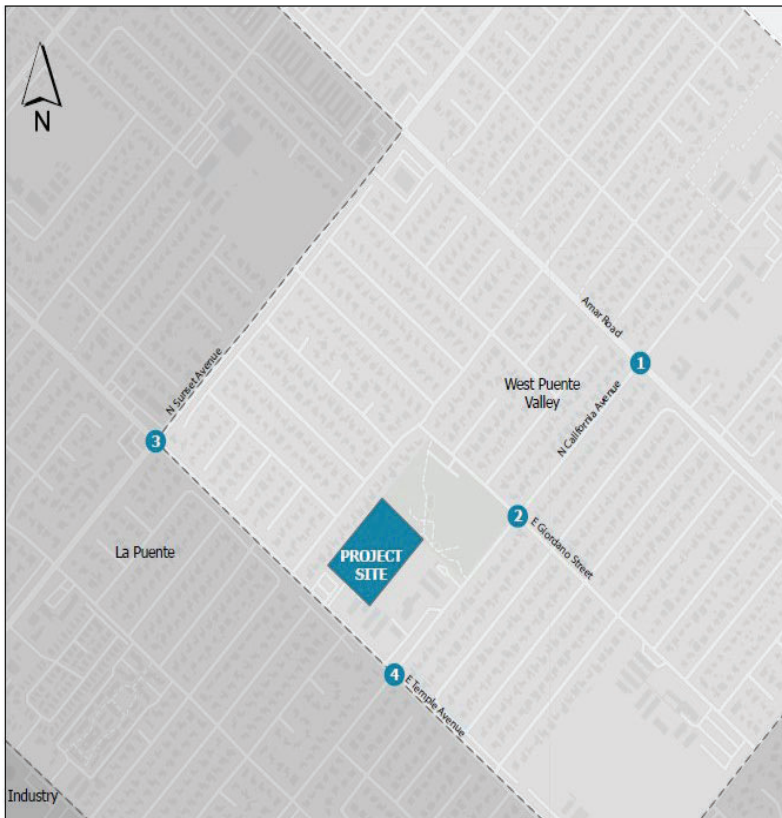
The addition of project traffic to the existing study area volumes causes the PM peak LOS of the California Avenue/Amar Road intersection to worsen from LOS D to E, but only based on a small 2.7-second delay increase from the project. The other intersection LOS values remain unchanged, with small delay increases due to project traffic.

The existing with-project volumes at the study intersections for the weekday a.m. peak-hour and p.m. peak-hour traffic turning movement volumes are illustrated on Figure 8. The analysis worksheets for this scenario are provided in Appendix E.

Figure 8 - Existing With-Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



3.6 FUTURE CONDITIONS

This section provides an analysis of future traffic conditions in the study area with cumulative/area project trips and background growth added, but without project traffic. The proposed project is anticipated to be completed within the year 2024, and therefore this defined the future analysis year.

Ambient Growth

In order to acknowledge regional population and employment growth outside of the study area, an annual ambient traffic growth rate of one percent was applied to the existing scenario traffic volumes.

Area Projects

Traffic from cumulative area projects (approved and pending developments) was also included in the analysis. The projects were identified during coordination with the County of Los Angeles Regional Planning and the City of La Puente. A total of 17 pending projects within a half-mile radius of the project site were identified for inclusion in the analysis.

Table 6 provides the trip generation estimates for the area projects, and the cumulative project locations are illustrated on Figure 9. The area project trip assignment volumes for the AM and PM peak hours are provided on Figure 10.

Table 6 – Area Projects Trip Generation

						WEEKDAY	AM PEAK HOUR				PM PEAK HOUR			SATURDAY MIDDAY		
ID	ITE CODE	ADDRESS	LAND USE	INTENSITY	UNITS ¹	DAILY	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	
1	210	14603 E Blackwood Street	Single-Family Detached Housing	1	DU	9	1	0	1	1	1	0	1	1	0	
2	210	1030 Shadydale Avenue		1		9	1	0	1	1	1	0	1	1	0	
3	210	1027 Glenshaw Drive		1		9	1	0	1	1	1	0	1	1	0	
4	210	1003 Glenshaw Drive		1		9	1	0	1	1	1	0	1	1	0	
5	210	920 Broadmoor Avenue La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
		921 Greenberry Drive, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
6	210	933 N California Avenue, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
		903 N California Avenue, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
7	210	14811 Flanner Street, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
		14638 Homeward Street, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
8	210	774 Glenshaw Drive, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
		762 Greenberry Drive, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
9	210	922 Aldgate Street		1		9	1	0	1	1	1	0	1	1	0	
		769 Duff Avenue, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
10	210	751 Duff Avenue, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
		727 Duff Avenue, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
11	210	615 Foxworth Avenue, La Puente CA 91744		1		9	1	0	1	1	1	0	1	1	0	
				1		9	1	0	1	1	1	0	1	1	0	
12	210		1	9	1	0	1	1	1	0	1	1	0			
Total						153	17	0	17	17	17	0	17	17	0	

Source: Rates taken from the ITE Trip Generation Manual, 10th Edition

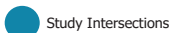
1) DU=Dwelling Units

FIGURE 9

County of Los Angeles - San Gabriel Valley Aquatics Center Area Projects Within a Half-Mile Radius



Area Project



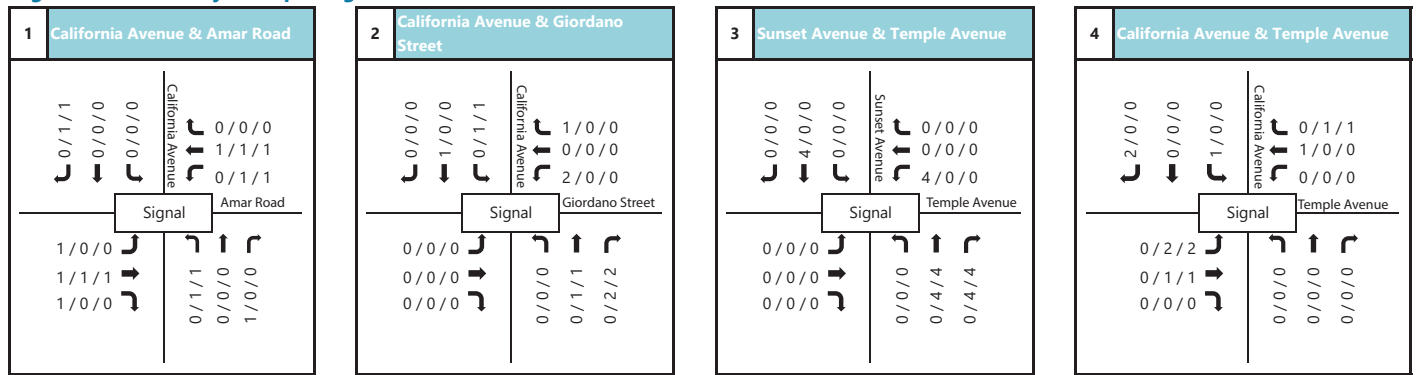
Study Intersections



Half Mile Buffer

0 0.25 0.5
Miles

Figure 10 - Area Project Trip Assignment - AM/PM Peak Hour



XX/XX AM/PM Peak Hour Traffic Volumes



Future Conditions without and with Project Traffic

Future baseline traffic volumes for the without-project condition were determined by applying ambient traffic growth and area project traffic volumes onto the existing traffic volumes. Under the future with-project scenario, the traffic volumes were derived by adding project trips to the future baseline traffic volumes.

Table 7 provides the results of the vehicle delay in seconds and LOS values at the study intersections for Future without-project and Future with-project conditions.

Table 7 – Future Intersection Delay and Performance

Study Intersections		Peak Hour	Future (2024) Without Project		Future (2024) with Project	
			Delay in Sec.	LOS	Delay in Sec.	LOS
1	California Avenue and Amar Road	AM	28.2	C	29.5	C
		PM	57.3	E	60.1	E
		SAT	40.2	D	40.8	D
2	California Avenue and Giordano Street*	AM	7.9	A	7.9	A
		PM	10.0	A	10.2	B
		SAT	8.6	A	8.6	A
3	Sunset Avenue and Temple Avenue	AM	70.5	E	70.5	E
		PM	99.7	F	100.5	F
		SAT	59.9	E	60.0	E
4	California Avenue and Temple Avenue	AM	34.0	C	34.2	C
		PM	37.1	D	37.5	D
		SAT	32.0	C	32.1	C

LOS = Level of Service; HCM delay shown in X.X format.

*Stop Controlled Intersection

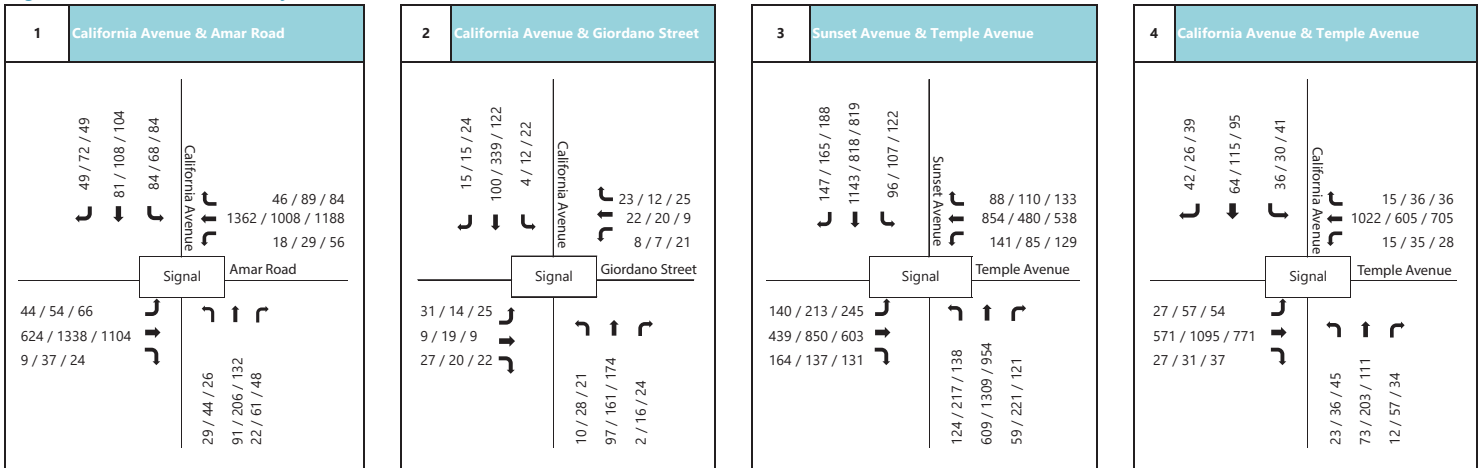
The study intersections will continue to operate similarly to operations analyzed for the existing with-project conditions scenario.

The addition of project traffic to the future study area volumes does not cause any changes in LOS values. The highest delay increase that occurs in the PM is small, but is only a 2.7-second delay increase from the project. The other intersection LOS values remain unchanged, with small delay increases due to project traffic. These traffic effects of the project are considered to be insignificant, and operational improvements are not recommended.

The Future without-project traffic volumes for the weekday a.m. and p.m. peak hours are illustrated on Figure 11. The Future without-project traffic analysis worksheets for this scenario are provided in Appendix F.

The Future with-project traffic volumes for the weekday a.m. and p.m. peak-hour volumes are illustrated in Figure 12. The analysis worksheets for this scenario are provided in Appendix G.

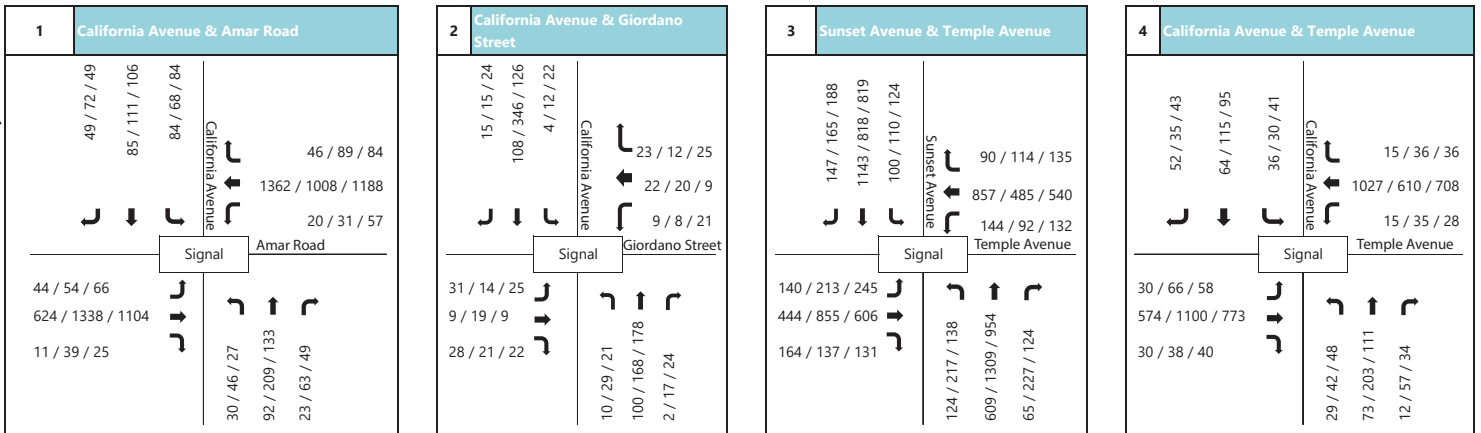
Figure 11 - Future Without Project - AM/PM Peak Hour Traffic Volumes



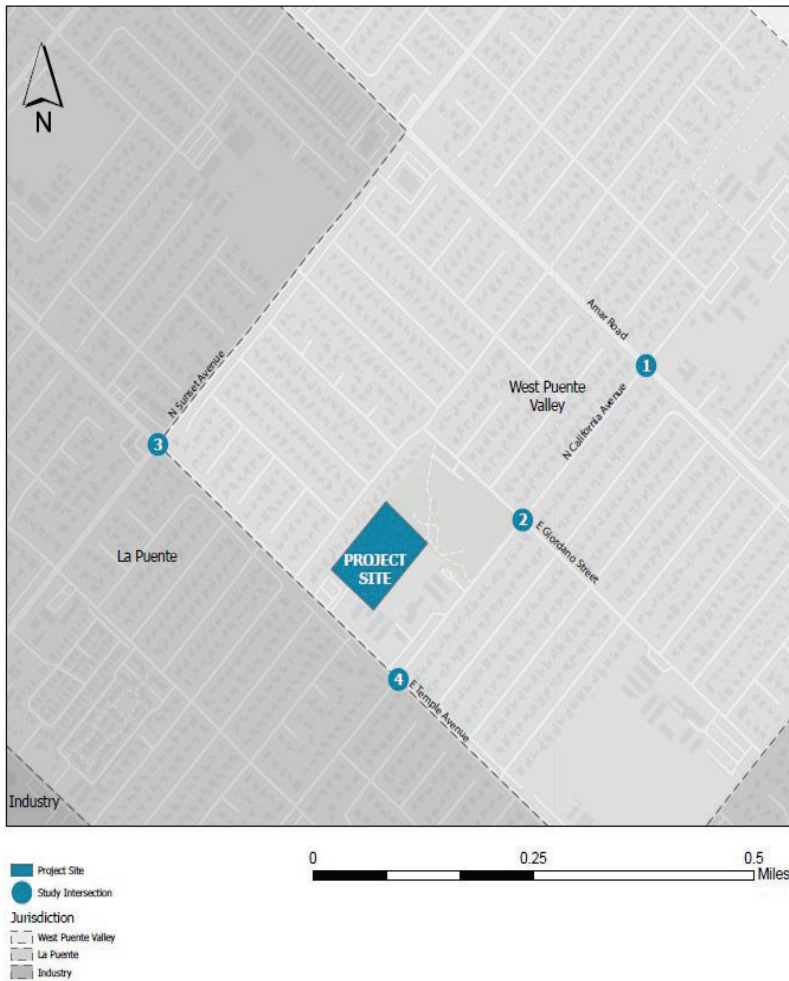
XX/XX AM /PM Peak Hour Traffic Volumes



Figure 12 – Future With-Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



3.7 QUEUING CONDITIONS

The level of service output provided in the appendices include queuing information by approach calculated by the Highway Capacity Manual method. Locations where striped turn pockets are provided at study intersections, and the project driveway access on Temple Avenue, are analyzed below.

Intersection Queuing

At the California Avenue/Amar Road intersection, operations would be at LOS E in the PM peak hour, and LOS D or better in the other peak hours, with or without the project. Queuing at the northbound and southbound approaches would increase by one or two vehicles with the proposed project. At the other approaches, queuing value increases due to the project would be much lower than one vehicle on average.

At the California Ave / Giordano St intersection, operations would be at LOS B or better in all peak hours, with or without the project. Queuing value increases due to the project would be much lower than one vehicle on average.

At the Sunset Ave / Temple Ave intersection, operations would be at LOS E in the AM and Saturday peak hours and LOS F in the PM peak hour, with or without the project. The queuing values with and without the project at all of the left-turn pockets would exceed the physical design lengths. However, queuing value increases due to the project would be nine to ten feet at the most affected movement, which is approximately one-half of one vehicle or less.

At the California Ave / Temple Ave intersection, operations would be at LOS D or better in all peak hours, with or without the project. Queuing value increases due to the project would be much lower than one vehicle on average.

The queuing changes associated with the project would not cause changes traffic operations or cause blockages at nearby driveways. No changes to traffic controls or design measures such as lane configurations are recommended for the study intersections, based on this analysis.

Table 8 provides a summary of the queuing analysis at the study intersection striped turn pockets. All of the identified queuing increases due to project traffic would be nominal to operations, as all of the estimated increases are less than one vehicle and are therefore minor circulation impacts.

The County will make timing adjustments in the future to accommodate queuing based on area cumulative conditions, as part of on-going traffic operations planning.

Table 8 – Intersection Turn Pocket Queuing Analysis

Movement		No. Lanes	Peak Hour Volume			95% Queue (ft.)			Storage (ft.)	Adequate Storage?
			AM	PM	Sat	AM	PM	Sat		
1) California Ave and Amar Rd										
EBL	Existing	1	42	52	64	39	39	56	115	Yes
	Existing + Project	1	42	52	64	39	39	56		
	Difference	-	0	0	0	0	0	0		
	Future without Project	1	44	54	66	43	41	60		
	Future with Project	1	44	54	66	43	41	60		
	Difference	-	0	0	0	0	0	0		
WBL	Existing	1	17	27	53	9	24	42	155	Yes
	Existing + Project	1	19	29	54	11	26	43		
	Difference	-	2	2	1	2	2	1		
	Future without Project	1	18	29	56	10	26	46		
	Future with Project	1	20	31	57	11	28	47		
	Difference	-	2	2	1	1	2	1		
3) Sunset Ave and Temple Ave										
NBL	Existing	1	120	211	134	202	348	204	155	No
	Existing + Project	1	120	211	134	202	348	204		
	Difference	-	0	0	0	0	0	0		
	Future without Project	1	124	217	138	210	376	212		
	Future with Project	1	124	217	138	210	376	212		
	Difference	-	0	0	0	0	0	0		
SBL	Existing	1	93	104	118	129	169	181	150	No
	Existing + Project	1	97	107	120	135	176	185		
	Difference	-	4	3	2	6	7	4		
	Future without Project	1	96	107	122	134	176	191		
	Future with Project	1	100	110	124	140	183	194		
	Difference	-	4	3	2	6	7	3		
EBL	Existing	1	136	207	238	183	263	306	195	No
	Existing + Project	1	136	207	238	184	264	306		
	Difference	-	0	0	0	1	1	0		
	Future without Project	1	140	213	245	190	271	317		
	Future with Project	1	140	213	245	190	272	317		
	Difference	-	0	0	0	0	1	0		
WBL	Existing	1	133	83	125	173	107	163	155	No
	Existing + Project	1	136	90	128	177	116	168		
	Difference	-	3	7	3	4	9	5		
	Future without Project	1	141	85	129	185	110	169		
	Future with Project	1	144	92	132	189	120	174		
	Difference	-	3	7	3	4	10	5		
4) California Ave and Temple										
EBL	Existing	1	26	53	50	14	28	26	120	Yes
	Existing + Project	1	29	62	53	15	32	28		
	Difference	-	3	9	3	1	4	2		
	Future without Project	1	27	57	54	14	30	28		
	Future with Project	1	30	66	58	16	35	30		
	Difference	-	3	9	4	2	5	2		
WBL	Existing	1	15	34	27	8	18	14	130	Yes
	Existing + Project	1	15	34	27	8	18	14		
	Difference	-	0	0	0	0	0	0		
	Future without Project	1	15	35	28	8	18	14		
	Future with Project	1	15	35	28	8	18	14		
	Difference	-	0	0	0	0	0	0		

Site Driveway Queuing

The project site would have one access driveway on Temple Street. The driveway location would create an unsignalized intersection with the roadway of Temple Street. The Temple Street approaches would be uncontrolled and the driveway approach for traffic departing the site would be stop-controlled.

Under future conditions with the project, the project driveway on Temple Avenue would have a 95th percentile eastbound left-turn average queue of less than one vehicle during the AM peak hour and a similar average queue during the PM peak hour. These queues would not be enough to cause any significant operational impacts or safety impacts and would be virtually unnoticed by drivers.

The inbound queuing at the project driveway would not significantly affect area traffic operations or cause blockages at adjacent driveways. No additional controls or design measures are recommended for the project driveway location, based on this analysis.

4. SITE ACCESS STUDY – SPECIAL EVENTS

A specialized analysis was conducted for special events that will be hosted at the project site. The facility will host regional meets up to six times a year that will bring spectators from the Southwest region. These would be occasional special events, and County Parks will not operate the facilities for these events. During those times, the facility will be leased to swim organizations and competition organizations. An analysis was conducted of trip generation and parking demand that is estimated to occur during the events.

Project facility planning includes a seating capacity of approximately 500 people. Regional meets may have up to 2,000 spectators per day, attending specific heats at different periods of the day. The seating capacity was used to conservatively review the potential local effects of a capacity-level event, although many events may not use the capacity of the facility.

Participants in the regional meets would not be of driving age, and therefore vehicle trip generation and parking demand would be generated by spectators. Assuming that a typical vehicle occupancy for arriving spectators would be two persons, the trip generation for round trips to and from the facility and the parking demand for one heat would be 250 vehicles.

Event parking demand and traffic circulation effects are analyzed in the sections below.

Event Parking Demand

The project parking lot has a planned vehicle parking capacity of 72 spaces. This supply would not be able to accommodate the expected event parking demand in its entirety. Additional parking supplies would need to be temporarily provided through leases or other means during the events, to provide nearby additional off-street parking supplies. This should be pursued by the County and the event organizations to avoid local neighborhood parking and circulation impacts.

Under typical daily operations of the project facilities, outside of these occasional regional meets, parking demand would be contained within the site off-street supply. There would not be a need under typical project operations to secure off-site parking supplies.

Event Traffic Effects

Using the same event spectator numbers as those applied to the parking analysis, it was assumed that vehicle round trips for each heat of a regional meet would be the same as the parking demand at 250 vehicles.

For event trip generation, 250 inbound trips were assumed, along with 250 outbound trips. This would represent the overlap between two heats with a change in spectators. Not all of the spectators would likely arrive and depart within a one-hour timeframe, so 30 percent of the trips were assumed to occur outside of the analyzed peak-hour period. Trips were therefore analyzed as 175 inbound and 175 outbound.

The special event trips were analyzed within the study area. Table 9 provides a summary of study area traffic operations with and without special events, applying the same baseline conditions used to analyze the typical operations of the proposed project in earlier report sections.

**Table 9 – Future Intersection Delay and Performance –
Project Special Events**

Study Intersections		Peak Hour	Future (2024) Without Project		Future (2024) with Regional Meet	
			Delay in Sec.	LOS	Delay in Sec.	LOS
1	California Avenue and Amar Road	SAT	40.2	D	47.5	D
2	California Avenue and Giordano Street*	SAT	8.6	A	9.1	A
3	Sunset Avenue and Temple Avenue	SAT	59.9	E	61.5	E
4	California Avenue and Temple Avenue	SAT	32.0	C	33.5	C

LOS = Level of Service; HCM delay shown in X.X format.

*Stop Controlled Intersection

The anticipated special event traffic will not have a significant effect on study area traffic operations. The average delay at the California Avenue/Amar Road intersection would worsen by approximately seven seconds, but LOS would not worsen beyond the baseline value of D. The small 1.6-second increase in average delay at the intersection of Sunset Avenue/Temple Avenue would not be a significant effect. Overall, no level of service degradations would occur with the added trips.

Event Management Recommendations

The regional meets at the project site are special events that should be managed by a Traffic Event Management Plan, based on the parking demand and traffic circulation effects analyzed above. The Plan would define the following:

- The expected timeframe of regional meets and the schedule for heats throughout the day of the event.
- Scheduling plan that avoids overlap of events at the proposed project and the Performance Art Center.
- The locations of supplemental parking supplies, the owner(s), and documentation of the agreement(s) that provide for the leasing or sharing of parking. Use of gated access to the planned Performance Art Center to the south, for shared parking use.
- Inbound and outbound access plan for the main project driveways on Temple Avenue, including restrictions to access for right-turn inbound only and right-turn outbound only movements.
- Wayfinding methods including directional signage and placement of event staff at critical locations at the perimeter of the site and approaching roadways to direct incoming vehicles to available parking on-site and to the supplemental supplies.
- Event media and on-line resources that provide a map and directions to parking areas in relation to the site.
- Methods for adjusting to times between heats when one group of spectators is leaving and one group is entering.
- Designation of points of traffic control by authorized personnel at major ingress and egress locations, including project site driveways for on-site parking and pick-up/drop-off areas access, and any major off-site parking location access, to control queuing onto neighboring roadways.
- Designation of any other necessary traffic control locations.
- Designation of bus loading zones, if needed, and Uber/Lyft loading zones.

5. IMPACTS AND EFFECTS CONCLUSIONS

Project transportation impacts were analyzed for CEQA and non-CEQA related issues in this transportation assessment report. As indicated in the analysis details, the proposed project is not expected to conflict with County of Los Angeles plans, programs, ordinances, or policies.

The project would not cause a significant regional vehicle miles traveled (VMT) increase. The impact threshold for the project was defined as no significant increase in VMT. The characteristics of this facility and the local use patterns that will result make the project impacts on VMT less than significant, per County California Environmental Quality Act (CEQA) analysis requirements and the applied project threshold. This analysis is provided in Section 2.

The access analysis of potential local effects of project traffic indicated that the project and generated traffic are not expected to significantly affect existing roadway operations, access, and safety. All of the identified queuing increases due to project traffic would be nominal to operations, as all of the estimated increases are less than one vehicle and are therefore minor circulation impacts. This analysis is provided in Section 3.

The regional meets at the project site are special events that should be managed by a Traffic Event Management Plan as analyzed in Section 4. It is recommended that based on the parking demand and traffic circulation effects analyzed in that section, that the Plan would define the following:

- The expected timeframe of regional meets and the schedule for heats throughout the day of the event.
- The locations of supplemental parking supplies, the owner(s), and documentation of the agreement(s) that provide for the leasing or sharing of parking.
- Wayfinding methods including directional signage and placement of event staff at critical locations at the perimeter of the site and approaching roadways to direct incoming vehicles to available parking on-site and to the supplemental supplies.
- Event media and on-line resources that provide a map and directions to parking areas in relation to the site.
- Methods for adjusting to times between heats when one group of spectators is leaving and one group is entering.
- Designation of points of traffic control by authorized personnel at major ingress and egress locations, including project site driveways for on-site parking and pick-up/drop-off areas access, and any major off-site parking location access, to control queuing onto neighboring roadways.
- Designation of any other necessary traffic control locations.
- Designation of bus loading zones, if needed, and Uber/Lyft loading zones.

APPENDIX A

Scoping Document



MEMORANDUM

Date: August 24, 2021

To: Kent Tsujii, County of Los Angeles Department of Public Works

From: Brian Marchetti, AICP

Subject: Traffic Scoping Document for San Gabriel Valley Aquatic Center Project

This document provides the proposed project details and study methodology for consideration and comment by the County of Los Angeles Department of Public Works. A copy of this document will be shared with the City of La Puente, as the proposed study area falls partially within that jurisdiction.

Project Description

The San Gabriel Valley Aquatic Center Project (Project) is proposed on the Temple Academy School property in unincorporated County area near the City of La Puente at 635 North California Ave, La Puente, CA 91744. The Assessor's ID is 8212-011-901. The planned opening year is 2024.

The school is part of the Hacienda La Puente Unified School District (HLPUSD). The County is planning to negotiate a ground lease with the HLPUSD to complete the project. The project site is bordered by Temple Academy school/North California Avenue on the south, East Temple Avenue to the west, residences/Evanwood Avenue to the north, and Allen J. Martin Park/East Giordano Street to the east. The new aquatic facility will be placed in an area currently used as play field and a parking lot at the corner of East Temple Ave and Evanwood Avenue. The facility will include a 10,800 square foot pool building, a large competitive swimming pool, a smaller practice pool, signage, fencing, bleachers, a new one-acre park area, central plaza, parking lot, and other site improvements.

Two proposed alternatives for the site plan are provided as attachments – Option 1 is provided in Attachment A, and Option 2 is provided in Attachment B.

Both site options provide for the main pool building and the competitive and practice pools, and all of those elements are the same size in each option. The orientation of the site is generally the same across both options. The proposed primary site access point on Temple Avenue to the south is the same under both options, as are the pedestrian access points at Allen



J Martin Park to the north. The parking lot will be provided at the Temple Avenue side of the site, with all vehicular access via a proposed driveway on Temple Avenue.

Vehicle Miles Traveled (VMT) Analysis

Swimmers in the area use existing facilities in other locations. For the analysis of transportation impacts under the California Environmental Quality Act (CEQA), the presence of other existing similar pool facilities (in other locations) and how existing swimmers use these facilities will be documented. It is anticipated that the project would reduce some trips to these other facilities as they are located further from the local neighborhood and will therefore reduce area VMT for local swimmers. No new swim/sports groups or leagues will be formed due to this facility development. Those local swimmers using the facility for practice will have a shorter distance to travel from existing facilities that they are using. The potential regional impact of regional swim meets that may be relocated to the new facility will be evaluated in the report.

Project Trip Generation

The built areas of the project site will include the 10,800 square-foot pool building, and the competitive and practice pools. The combined area of these elements is 29,255 square feet. Applying Institute of Transportation Engineers (ITE) rates from *Trip Generation*, 10th edition for the recreational community center land use category, provides for an estimate of project trips for weekday daily at 843. This includes 51 AM peak hour trips and 68 PM peak hour trips. Saturday mid-day peak-hour trips would be 31.

PROJECT TRIP GENERATION

Land Use ¹	Intensity	Units ²	Daily Total	Weekday AM Peak			Weekday PM Peak			Saturday Mid-Day		
				Total	In	Out	Total	In	Out	Total	In	Out
Trip Generation Rates												
Recreational Community Center (ITE 495)	-	KSF	28.82	1.76	66%	34%	2.31	47%	53%	1.05	53%	47%
Trip Generation Estimates												
Proposed Pool Project	29.2547	KSF	843	51	34	17	68	32	36	31	17	14
Total			843	51	34	17	68	32	36	31	17	14

Site Access Studies

Each of the site access studies defined by the County traffic guidelines for non-CEQA analysis are reviewed below for applicability to the proposed project.

Operational Analysis

This study section is required when site access and circulation constraints must be reviewed. These specific questions determine the need for this analysis:

- Is the project required to submit a Transportation Impact Analysis?
- Does the development project involve a discretionary action that would be reviewed by the Department of Regional Planning?

Based on the daily trip generation of the project at 843, and the minimum County threshold of 110 trips for site access studies screening, the project is required to submit a Transportation Impact Analysis.

The County traffic guidelines state that this analysis should "...address the site access and circulation needs of vehicles, bicycles and pedestrians. Including primary site access points, unsignalized intersections integral to the project's site access, and signalized intersections in the vicinity of the project site."

The required quantitative evaluation of the expected access and circulation operations will include a level of service and queuing analysis. Queuing will be evaluated for pre-project and post-project conditions at turn pockets, at the project study intersections and the driveway access point. It will be determined if the project would cause queuing to block nearby intersections and other site driveways.

The traffic study will examine four intersections in the local area for impacts under City and County guidelines under the project operations period. The locations are listed below and shown on the figure in Attachment C:

1. California Avenue/Amar Road
2. California Avenue/Giordano Street
3. Sunset Avenue/ Temple Avenue
4. California Avenue/Temple Avenue

The overall area project trip distribution percentages are included on the Attachment C figure. The percentages at the study intersections, totaling 100 percent for inbound and 100 percent for outbound trips, are provided on the figure in Attachment D.

Historic counts will be used, to represent pre-COVID traffic conditions. A combination of new counts and historic counts may be used, and the newer counts will be compared to volumes at one or more control locations, to factor upward as needed. The factoring would provide increases if volumes from new collected data are low.

The report will evaluate potential queuing at the inbound left-turn of the project Temple Avenue driveway as it will require turning from a travel lane in the eastbound direction. A Highway Capacity Manual analysis will be conducted based on the project trip generation and the volumes analyzed at the nearby study intersection.



A construction phase analysis for the peak trip phase of the construction period, will be analyzed with a trip generation table of anticipated employee levels and off-site truck hauling/delivery trips, and an analysis of level of service effects at the study intersections.

Construction Phase Analysis

This analysis as defined by the County guidelines will not be conducted, as project construction will not directly affect adjacent roadways. The project will not require major construction activities that require lane closures to take place within the right-of-way of adjacent roadways, nor would vehicle, bicycle, or pedestrian access on area roadways be physically restricted during project construction.

Local Residential Street Cut-Through Analysis

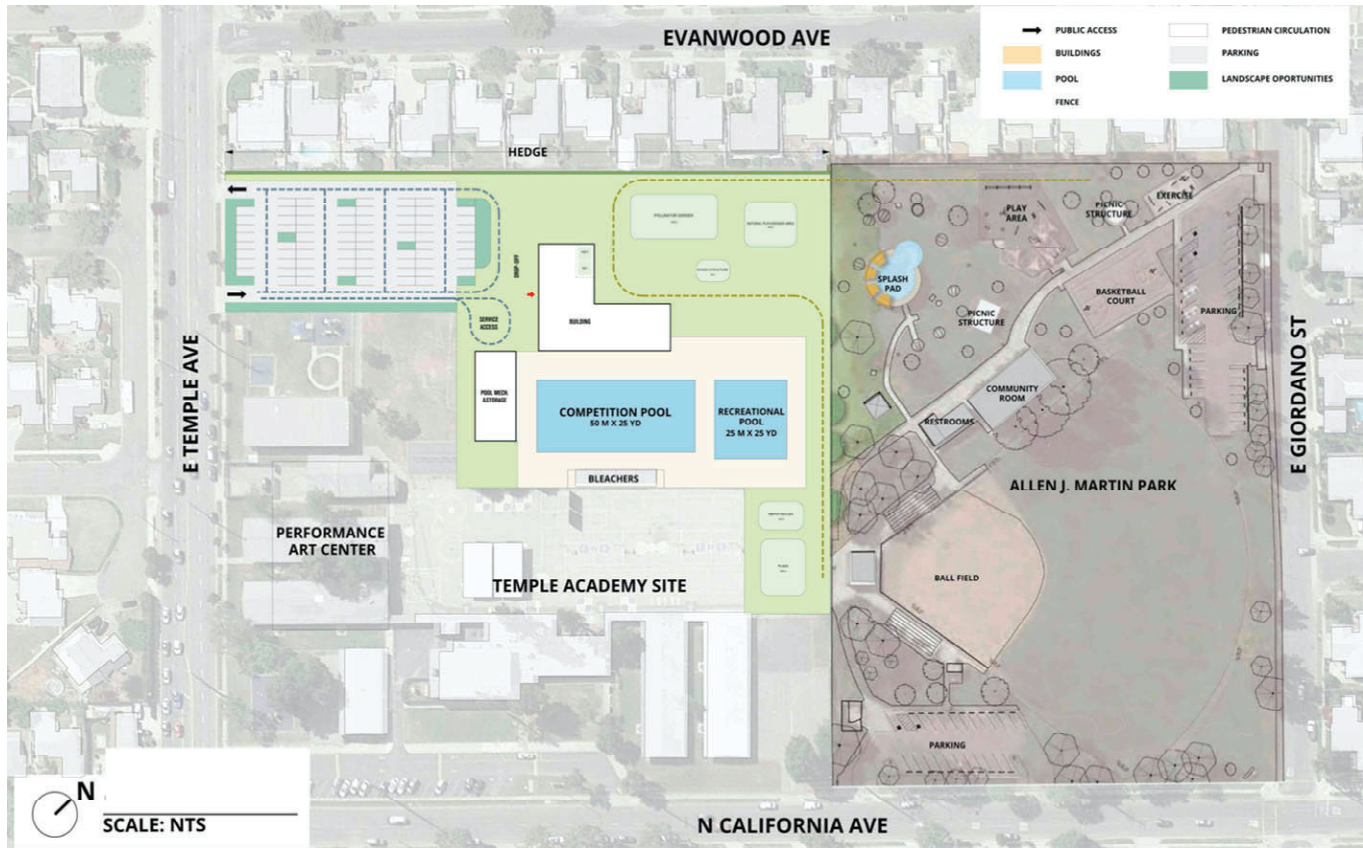
This analysis will not be conducted, as there are no identified Local Streets near the project site that would provide cut-through routes that are shorter than routes on collector or arterial roadways. The project is not expected to add vehicle trips to congested arterial street segments. Therefore, the project is not expected to add automobile traffic to alternative local residential roadways during peak hours.

Special Events

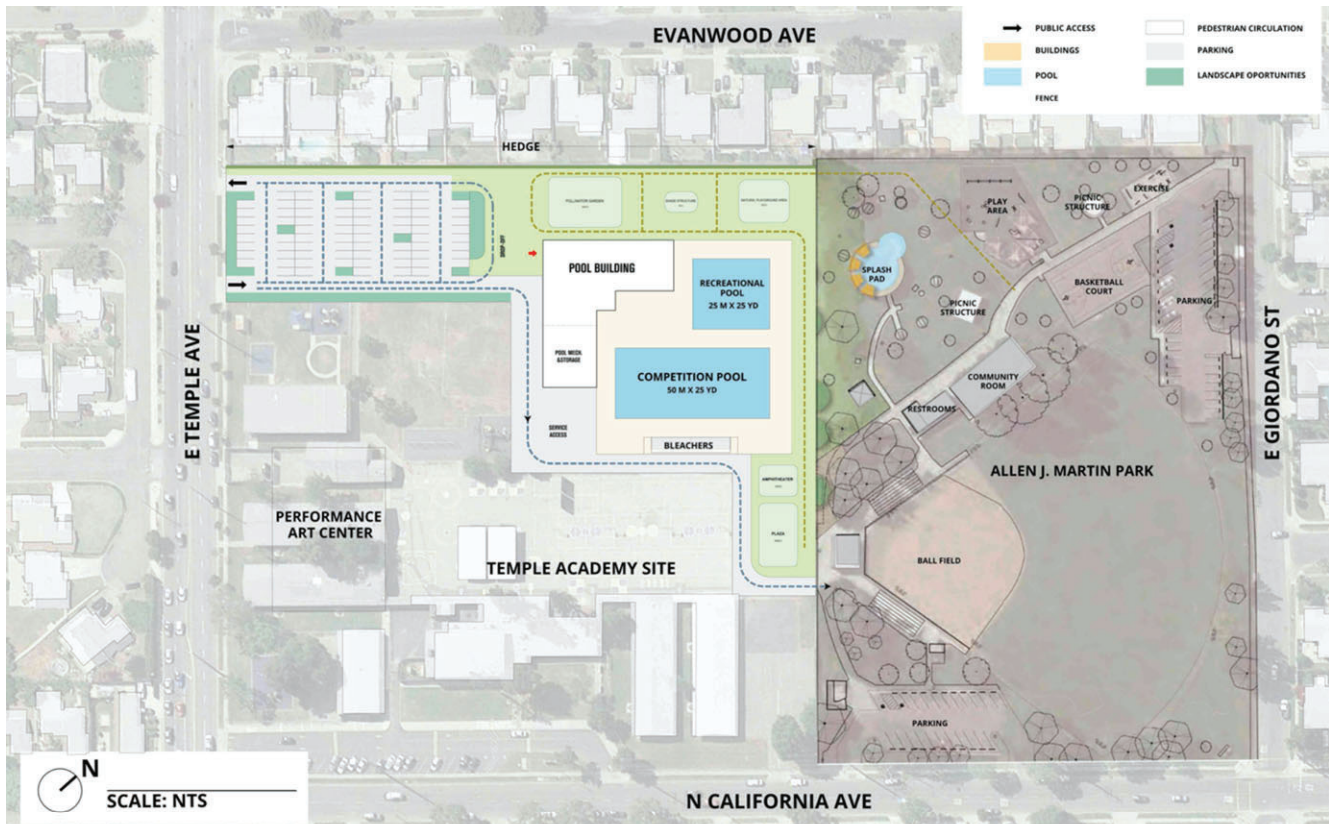
A specialized analysis will also be conducted for special events that will be hosted at the project site. The facility will host regional meets up to six times a year that will bring spectators from the Southwest region. These would be occasional special events, and County Parks will not operate the facilities for these events. During those times, the facility will be leased to swim organizations and competition organizations.

The study will evaluate in general the traffic operations and parking demand that will occur during the events. If the demand for parking exceeds the on-site supply of parking during events, then a Traffic Event Management Study will be conducted.

ATTACHMENT A – SITE PLAN OPTION 1



ATTACHMENT B – SITE PLAN OPTION 2



ATTACHMENT C – LOCAL TRAFFIC ANALYSIS STUDY INTERSECTIONS AND PROJECT TRIP DISTRIBUTION

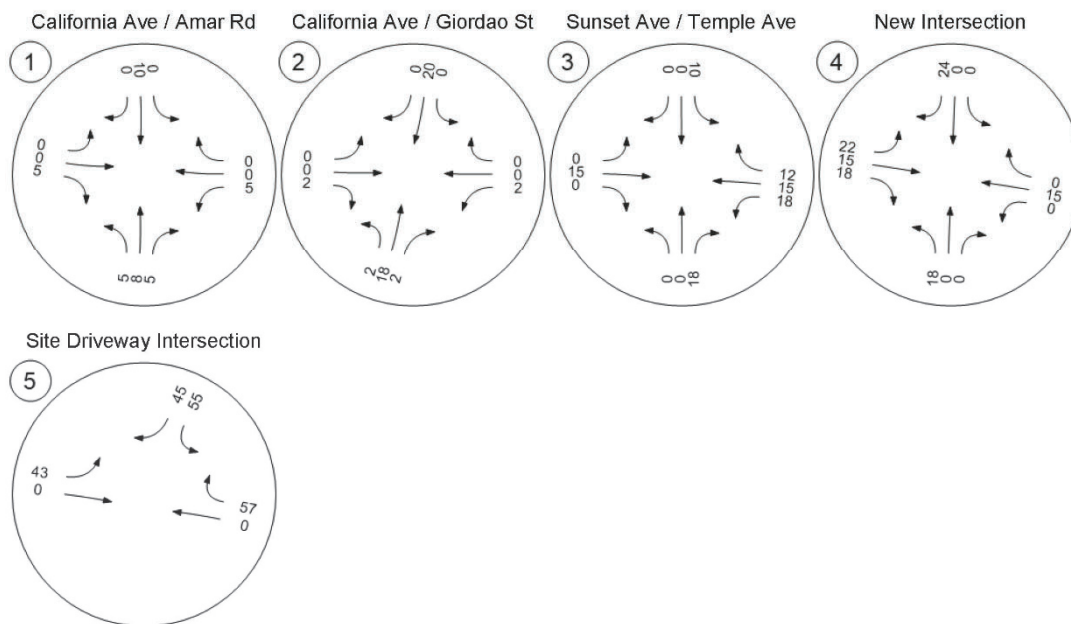
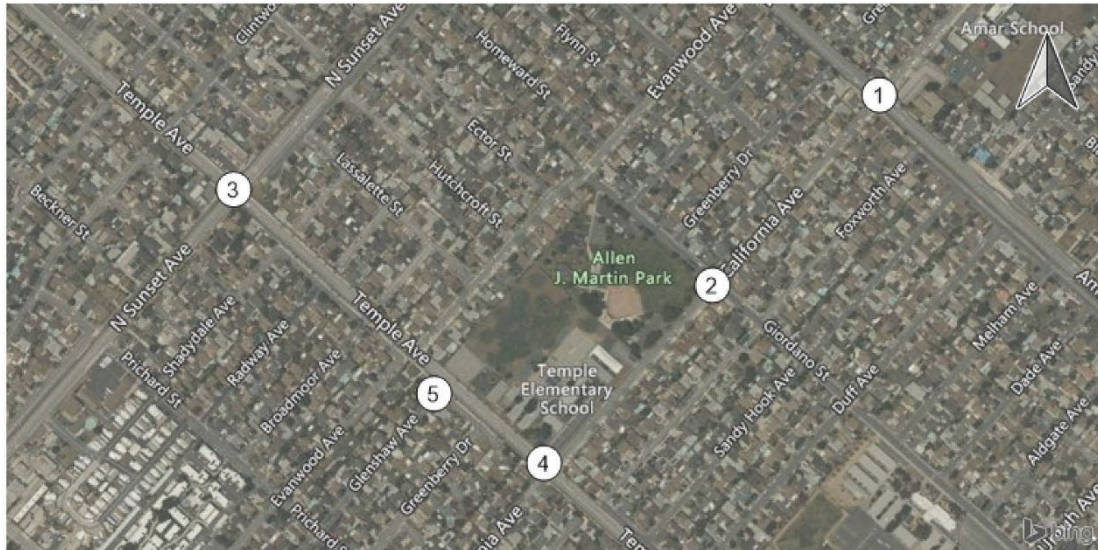


ATTACHMENT D – PROJECT TRIP DISTRIBUTION AT STUDY INTERSECTIONS

Generated with **PTV VISTRO**
Version 2021 (SP 0-2)

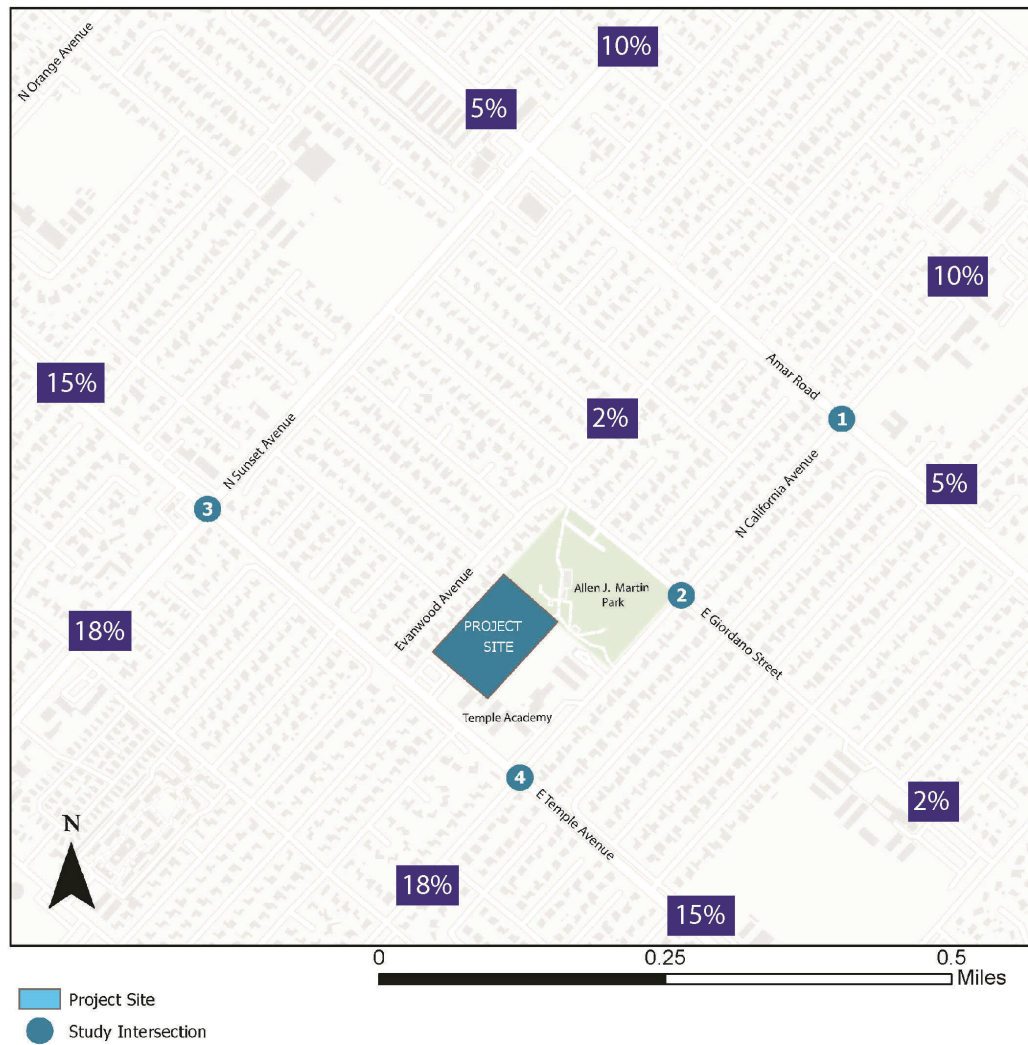
Scenario: Base Scenario
SGV Aquatics Center

Report Figure 7209074d: Traffic Volume - Net New Site Trips



3/27/2021

Project Overall Trip Distribution



APPENDIX B
Traffic Count Summaries

National Data & Surveying Services

Location: N California Ave & Amar Rd
City: La Puente
Control: Signalized

Project ID: 21-020128-001
Date: 5/6/2021

Total

NS/EW Streets:		N California Ave				N California Ave				Amar Rd				Amar Rd					
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
		0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU		
7:00 AM		3	3	2	0	2	6	6	0	5	61	3	0	4	176	2	0	273	
7:15 AM		7	9	3	0	11	7	7	1	4	90	4	0	3	192	5	0	343	
7:30 AM		6	17	3	0	15	4	3	0	6	85	3	0	4	221	4	0	371	
7:45 AM		5	16	2	0	12	16	8	0	8	111	1	0	0	226	8	0	413	
8:00 AM		3	8	0	0	17	17	9	0	6	87	1	0	1	221	10	0	380	
8:15 AM		4	16	8	0	9	14	11	0	7	109	0	0	6	188	7	0	379	
8:30 AM		5	3	5	0	10	8	4	0	9	104	3	0	2	188	8	0	349	
8:45 AM		5	9	4	0	15	16	6	0	8	118	2	0	3	146	15	0	347	
TOTAL VOLUMES:		38	81	27	0	91	88	54	1	53	765	17	0	23	1558	59	0	2855	
APPROACH %'s:		26.03%	55.48%	18.49%	0.00%	38.89%	37.61%	23.08%	0.43%	6.35%	91.62%	2.04%	0.00%	1.40%	95.00%	3.60%	0.00%		
PEAK HR:		07:30 AM - 08:30 AM																	TOTAL
PEAK HR VOL:		18	57	13	0	53	51	31	0	27	392	5	0	11	856	29	0	1543	
PEAK HR FACTOR:		0.750	0.838	0.406	0.000	0.779	0.750	0.705	0.000	0.844	0.883	0.417	0.000	0.458	0.947	0.725	0.000	0.934	
		0.786				0.785				0.883				0.957					

PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
		0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU		
4:00 PM		2	31	10	0	13	16	3	0	18	208	5	0	1	164	10	0	481	
4:15 PM		5	36	7	0	25	26	12	0	12	222	1	0	4	180	20	0	550	
4:30 PM		4	32	4	0	18	13	10	0	8	234	5	0	12	183	15	0	538	
4:45 PM		5	26	4	0	10	30	11	0	10	238	5	0	9	193	24	1	566	
5:00 PM		11	36	10	0	12	16	11	0	9	241	7	1	4	200	13	0	571	
5:15 PM		6	50	8	0	15	22	14	0	5	238	6	0	7	181	18	0	570	
5:30 PM		5	32	17	0	12	20	20	0	15	243	8	0	5	193	17	0	587	
5:45 PM		10	36	10	0	12	23	8	0	11	274	7	0	5	177	18	0	591	
TOTAL VOLUMES:		NL 48	NT 279	NR 70	NU 0	SL 117	ST 166	SR 89	SU 0	EL 88	ET 1898	ER 44	EU 1	WL 47	WT 1471	WR 135	WU 1	TOTAL 4454	
APPROACH %'s:		12.09%	70.28%	17.63%	0.00%	31.45%	44.62%	23.92%	0.00%	4.33%	93.45%	2.17%	0.05%	2.84%	88.94%	8.16%	0.06%		
PEAK HR:		05:00 PM - 06:00 PM																	TOTAL
PEAK HR VOL:		32	154	45	0	51	81	53	0	40	996	28	1	21	751	66	0	2319	
PEAK HR FACTOR:		0.727	0.770	0.662	0.000	0.850	0.880	0.663	0.000	0.667	0.909	0.875	0.250	0.750	0.939	0.917	0.000	0.981	
		0.902				0.889				0.912				0.965					

Day: Thursday
Date: 05/06/2021

ID: 21-020128-001
City: La Puente

Day: Thursday
Date: 05/06/2021

Count Periods

Peak Hours

07:30 AM - 08:30 AM
NONE
05:00 PM - 06:00 PM

Count Periods

07:00 AM - 09:00 AM
NONE
04:00 PM - 06:00 PM

Eastbound

AM NOON PM

905 0 837

0 0 1

27 0 40

392 0 996

5 0 28

AM NOON PM

Control

Signalized

TEV 1543 0 2319
AM NOON PM

PHF 0.93 0.98

Westbound

PM NOON AM

66 0 29

751 0 856

21 0 11

0 0 0

1092 0 458

PM NOON AM

Southbound

AM 31 51 53 0 113 AM

NOON 0 0 0 0 0 NOON

PM 53 81 51 0 260 PM

Northbound

PM 130 0 32 154 45 PM

NOON 0 0 0 0 0 NOON

AM 67 0 18 57 13 AM

Total Vehicles (AM)

Total Vehicles (NOON)

Total Vehicles (PM)

Pedestrians (Crosswalks)

Total Vehicles (AM)

Total Vehicles (NOON)

Total Vehicles (PM)

National Data & Surveying Services

Intersection Turning Movement Count

Location: N Sunset Ave & E Temple Ave
City: La Puente
Control: Signalized

Project ID: 21-020128-003
Date: 5/6/2021

Total

NS/EW Streets:	N Sunset Ave				N Sunset Ave				E Temple Ave				E Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	13	59	5	0	9	155	12	0	11	43	18	0	27	104	11	0	467
7:15 AM	16	70	7	0	9	210	16	0	15	44	22	0	21	119	9	0	558
7:30 AM	17	72	9	0	7	198	27	0	21	48	17	0	27	124	13	0	580
7:45 AM	19	92	7	0	14	205	22	0	20	79	30	0	22	162	14	0	686
8:00 AM	18	84	13	0	15	182	29	0	23	64	28	0	21	122	14	0	613
8:15 AM	21	94	8	0	12	186	22	0	24	60	26	0	31	121	13	0	618
8:30 AM	20	113	9	0	19	144	20	0	21	73	19	0	12	132	14	0	596
8:45 AM	14	78	8	0	12	132	28	0	27	89	17	0	31	107	20	0	563
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	138	662	66	0	97	1412	176	0	162	500	177	0	192	991	108	0	4681
	15.94%	76.44%	7.62%	0.00%	5.76%	83.80%	10.45%	0.00%	19.31%	59.59%	21.10%	0.00%	14.87%	76.76%	8.37%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	78	383	37	0	60	717	93	0	88	276	103	0	86	537	55	0	2513
PEAK HR FACTOR :	0.929	0.847	0.712	0.000	0.789	0.874	0.802	0.000	0.917	0.873	0.858	0.000	0.694	0.829	0.982	0.000	0.916
	0.877				0.902				0.905				0.856				

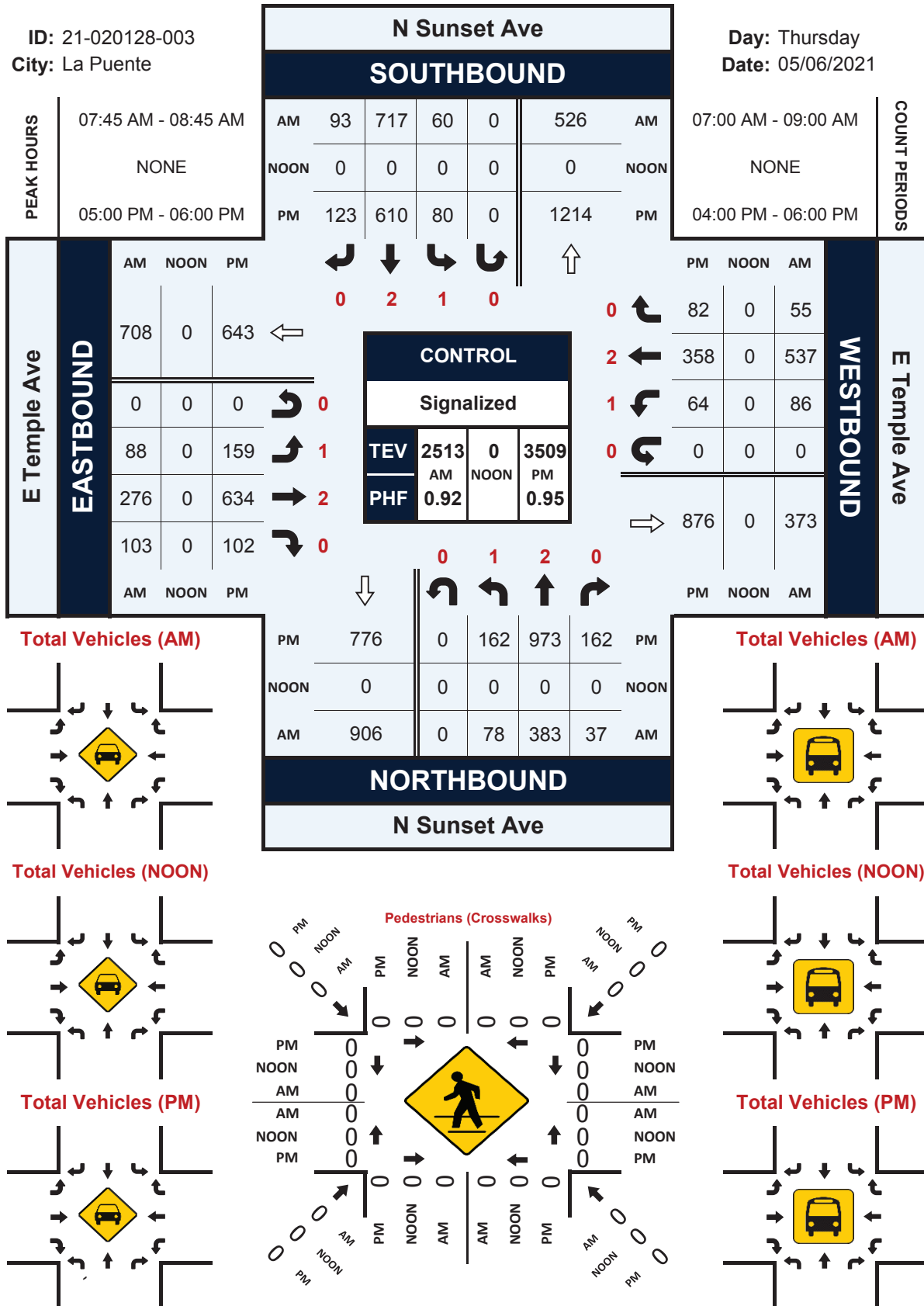
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	24	190	27	0	14	122	26	0	39	148	18	0	22	84	18	0	732
4:15 PM	26	192	28	0	32	158	23	0	40	125	24	0	10	81	15	0	754
4:30 PM	38	225	29	0	17	122	16	0	36	178	32	0	18	103	13	0	827
4:45 PM	41	219	27	0	20	136	21	0	54	154	25	0	17	76	15	0	805
5:00 PM	43	265	45	0	25	151	25	0	49	175	25	0	14	93	14	0	924
5:15 PM	42	261	47	0	25	154	31	0	36	146	21	0	19	82	20	0	884
5:30 PM	42	212	30	0	10	164	33	0	34	144	31	0	16	94	22	0	832
5:45 PM	35	235	40	0	20	141	34	0	40	169	25	0	15	89	26	0	869
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	291	1799	273	0	163	1148	209	0	328	1239	201	0	131	702	143	0	6627
	12.31%	76.13%	11.55%	0.00%	10.72%	75.53%	13.75%	0.00%	18.55%	70.08%	11.37%	0.00%	13.42%	71.93%	14.65%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	162	973	162	0	80	610	123	0	159	634	102	0	64	358	82	0	3509
PEAK HR FACTOR :	0.942	0.918	0.862	0.000	0.800	0.930	0.904	0.000	0.811	0.906	0.823	0.000	0.842	0.952	0.788	0.000	0.949
	0.919				0.968				0.899				0.955				

N Sunset Ave & E Temple Ave

Peak Hour Turning Movement Count

ID: 21-020128-003
City: La Puente

Day: Thursday
Date: 05/06/2021



National Data & Surveying Services

Intersection Turning Movement Count

Location: N California Ave & E Temple Ave
City: La Puente
Control: Signalized

Project ID: 21-020128-004
Date: 5/6/2021

Total

NS/EW Streets:	N California Ave				N California Ave				E Temple Ave				E Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	3	3	0	0	5	14	4	0	3	48	3	0	0	128	2	0	213
7:15 AM	7	8	2	0	2	8	3	0	2	60	0	0	6	131	2	0	231
7:30 AM	9	9	2	0	5	10	9	0	3	64	0	0	2	139	12	0	264
7:45 AM	2	14	2	0	6	8	6	0	6	91	7	0	2	187	4	0	335
8:00 AM	1	10	1	0	7	11	7	0	4	98	2	0	2	145	3	0	291
8:15 AM	6	12	4	0	5	14	6	0	4	73	5	0	5	155	3	0	292
8:30 AM	5	10	1	0	4	7	6	0	3	97	3	0	1	155	0	0	292
8:45 AM	4	9	2	0	4	11	7	0	6	99	4	0	3	138	1	0	288
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	37	75	14	0	38	83	48	0	31	630	24	0	21	1178	27	0	2206
	29.37%	59.52%	11.11%	0.00%	22.49%	49.11%	28.40%	0.00%	4.53%	91.97%	3.50%	0.00%	1.71%	96.08%	2.20%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	14	46	8	0	22	40	25	0	17	359	17	0	10	642	10	0	1210
PEAK HR FACTOR :	0.583	0.821	0.500	0.000	0.786	0.714	0.893	0.000	0.708	0.916	0.607	0.000	0.500	0.858	0.625	0.000	0.903
			0.773				0.870				0.945				0.858		

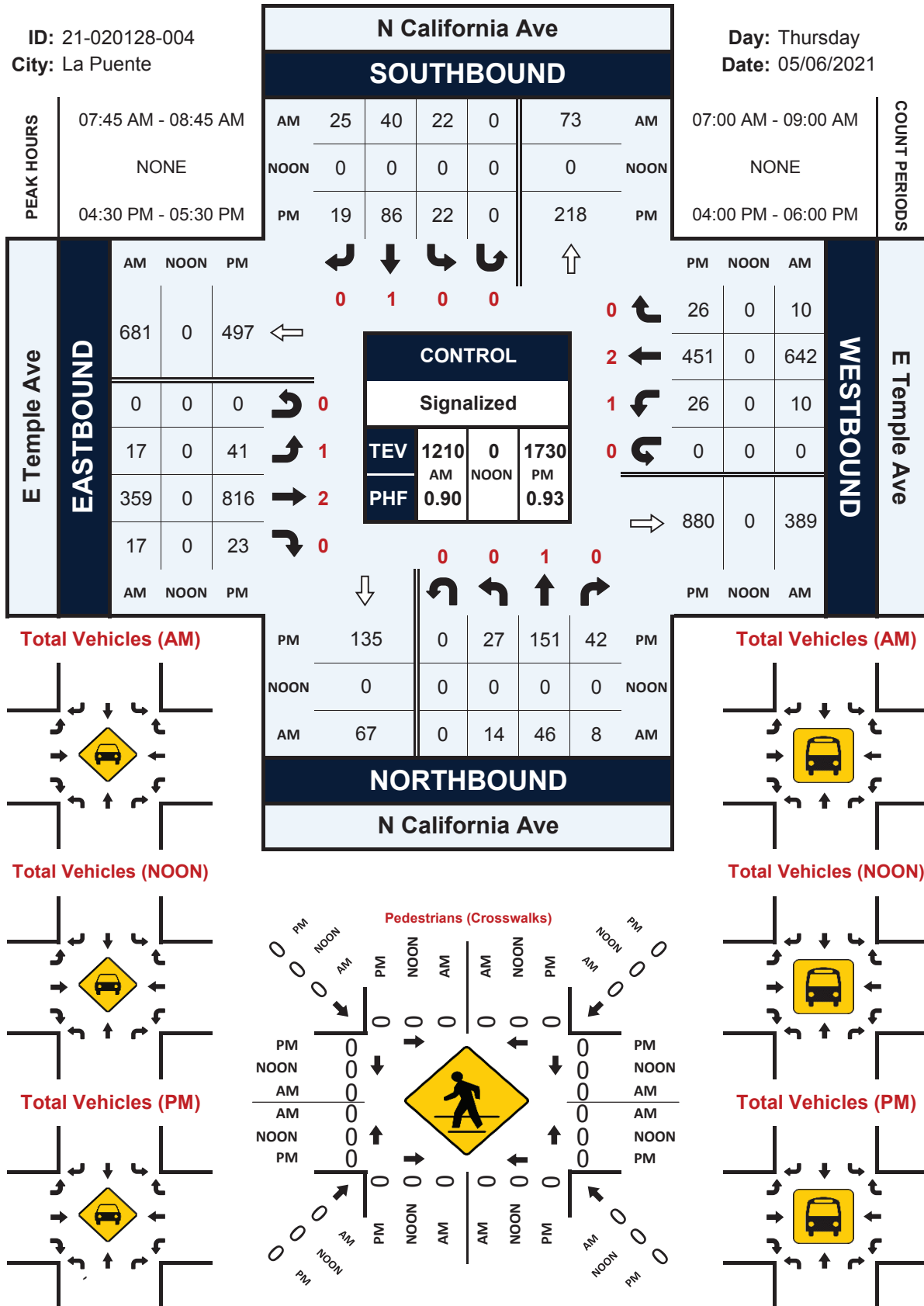
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	4	35	7	0	5	17	5	0	9	174	7	0	2	114	5	0	384
4:15 PM	6	29	8	0	5	21	4	0	6	172	1	0	10	103	11	0	376
4:30 PM	5	30	7	0	3	24	5	0	9	187	6	0	7	108	2	0	393
4:45 PM	7	31	15	0	12	22	6	0	9	193	4	0	8	110	9	0	426
5:00 PM	5	45	5	0	3	20	5	0	11	235	3	0	5	119	8	0	464
5:15 PM	10	45	15	0	4	20	3	0	12	201	10	0	6	114	7	0	447
5:30 PM	9	33	4	0	3	20	11	0	17	154	7	0	7	101	9	0	375
5:45 PM	6	30	6	0	3	24	7	0	14	200	6	0	2	122	7	0	427
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	52	278	67	0	38	168	46	0	87	1516	44	0	47	891	58	0	3292
	13.10%	70.03%	16.88%	0.00%	15.08%	66.67%	18.25%	0.00%	5.28%	92.05%	2.67%	0.00%	4.72%	89.46%	5.82%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	27	151	42	0	22	86	19	0	41	816	23	0	26	451	26	0	1730
PEAK HR FACTOR :	0.675	0.839	0.700	0.000	0.458	0.896	0.792	0.000	0.854	0.868	0.575	0.000	0.813	0.947	0.722	0.000	0.932
			0.786				0.794				0.884				0.953		

N California Ave & E Temple Ave

Peak Hour Turning Movement Count

ID: 21-020128-004
City: La Puente

Day: Thursday
Date: 05/06/2021



Los Angeles County Department of Public Works

Turning Movement Count

Report ID: 44

Access Date: 5/3/21 1:24 PM

Count Date: 2/5/2018 Monday

Counted By: Osvaldo Arana

Int.: CALIFORNIA AVENUE at GIORDANO STREET

Conditions: Clear

North Approach:	CALIFORNIA AVENUE	South Approach:	CALIFORNIA AVENUE
East Approach:	GIORDANO STREET	West Approach:	GIORDANO STREET

North Approach														South Approach													
Time	Cars			Trucks			Total Veh.			Ped. Across			Time	Cars			Trucks			Total Veh.			Ped. Across				
	Left	Thru	Right	Left	Thru	Right	15'	1 Hour	Adult	Child	Left	Thru		Right	Left	Thru	Right	15'	1 Hour	Adult	Child	15'	1 Hour	Adult	Child		
6:00 AM	0	9	0	0	0	0	9	45	0	0	0	1	0	0	0	0	0	1	16	0	0	0	10	61			
6:15 AM	0	3	0	0	0	0	3	44	0	0	0	0	1	0	0	0	0	1	20	0	0	0	4	64			
6:30 AM	0	19	1	0	0	0	20	51	0	0	0	5	1	0	0	0	6	28	0	0	0	26	79				
6:45 AM	0	13	0	0	0	0	13	39	0	0	0	1	5	2	0	0	8	33	0	0	0	21	72				
7:00 AM	0	6	2	0	0	0	8	61	0	0	0	1	4	0	0	0	5	68	1	0	0	13	129				
7:15 AM	1	9	0	0	0	0	10	82	2	0	0	1	8	0	0	0	9	101	0	0	0	19	183				
7:30 AM	2	6	0	0	0	0	8	103	1	0	0	0	7	4	0	0	11	112	0	0	0	19	215				
7:45 AM	4	31	0	0	0	0	35	114	5	2	2	35	6	0	0	0	43	111	5	1	78	225					
8:00 AM	3	25	1	0	0	0	29	98	0	0	0	2	32	4	0	0	38	84	6	0	67	182					
8:15 AM	1	27	1	0	2	0	31	91	0	0	0	0	19	1	0	0	20	86	0	0	51	177					
8:30 AM	0	19	0	0	0	0	19	84	0	0	0	2	8	0	0	0	10	88	0	0	29	172					
8:45 AM	0	17	2	0	0	0	19	92	0	0	0	3	13	0	0	0	16	90	0	0	35	182					
9:00 AM	1	18	3	0	0	0	22	102	1	0	0	4	32	4	0	0	40	90	2	1	62	192					
9:15 AM	5	17	1	0	1	0	24	98	1	0	0	2	20	0	0	0	22	63	0	0	46	161					
9:30 AM	3	21	2	0	1	0	27	97	0	0	0	1	9	2	0	0	12	69	0	0	39	166					
9:45 AM	2	24	2	0	1	0	29	102	1	0	0	2	13	1	0	0	16	71	3	0	45	173					
10:00 AM	2	13	1	0	2	0	18	88	0	0	0	1	10	2	0	0	13	73	0	0	31	161					
10:15 AM	1	19	3	0	0	0	23	105	0	0	0	3	22	3	0	0	28	89	0	0	51	194					
10:30 AM	3	28	0	0	1	0	32	101	0	0	0	1	11	1	0	1	14	80	0	0	46	181					
10:45 AM	1	14	0	0	0	0	15	104	0	0	0	0	17	1	0	0	18	98	0	0	33	202					
11:00 AM	5	27	3	0	0	0	35	127	0	0	0	2	25	2	0	0	29	111	0	0	64	238					
11:15 AM	0	17	2	0	0	0	19	0	0	0	0	5	11	3	0	0	19	0	0	0	38						
11:30 AM	6	27	2	0	0	0	35	0	0	0	0	4	24	4	0	0	32	0	0	0	67						
11:45 AM	3	26	9	0	0	0	38	0	0	0	0	3	26	1	0	1	31	0	0	0	69						
S. Total	43	435	35	0	8	0	513		11	2	40	358	42	0	2	0	442		17	2	19	963					

East Approach														West Approach													
Cars				Trucks				Total Veh.		Ped. Across		Cars				Trucks				Total Veh.		Ped. Across		Total Veh.			
Time	Left	Thru	Right	Left	Thru	Right	15'	1 Hour	Adult	Child	Left	Thru	Right	Left	Thru	Right	15'	1 Hour	Adult	Child	Left	Thru	Right	15'	1 Hour		
6:00 AM	5	0	0	0	0	0	5	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	28	
6:15 AM	2	0	1	0	0	0	3	17	0	0	0	0	0	0	0	0	1	1	16	0	0	0	4	0	4	33	
6:30 AM	1	0	4	0	0	0	5	18	0	0	0	0	0	0	0	3	0	5	18	0	0	0	10	0	10	36	
6:45 AM	1	1	1	1	0	0	4	29	0	0	0	0	2	3	0	0	5	21	0	0	0	9	0	0	9	50	
7:00 AM	2	1	2	0	0	0	5	57	1	0	0	3	1	0	1	0	5	39	2	0	0	10	0	10	96	96	
7:15 AM	2	2	0	0	0	0	4	65	0	0	1	1	1	0	0	0	3	41	0	0	0	7	0	7	106	106	
7:30 AM	3	6	7	0	0	0	16	63	0	0	1	6	1	0	0	0	8	46	0	0	0	24	0	24	109	109	
7:45 AM	18	3	11	0	0	0	32	48	1	0	3	7	13	0	0	0	23	42	2	0	0	55	0	55	90	90	
8:00 AM	6	0	7	0	0	0	13	19	0	0	1	4	2	0	0	0	7	20	2	0	0	20	0	20	39	39	
8:15 AM	2	0	0	0	0	0	2	17	0	0	1	3	4	0	0	0	8	31	0	0	0	10	0	10	48	48	
8:30 AM	1	0	0	0	0	0	1	23	0	0	1	1	1	0	1	0	4	27	1	0	1	5	0	5	50	50	

[illegible]

Los Angeles County Department of Public Works

Turning Movement Count

Access Date: 5/3/21 1:26 PM

Report ID: 44

Count Date: 2/5/2018 Monday

Int.: CALIFORNIA AVENUE at GIORDANO STREET

Conditions: Clear

Counted By: Osvaldo Arana

North Approach: East Approach:				CALIFORNIA AVENUE GIORDANO STREET				South Approach: West Approach:				CALIFORNIA AVENUE GIORDANO STREET							
Peak Time: 7:30 AM Intersection Peak Volume Total: 324								Six-Hour Average Hourly Volume Total: 220											
App	Veh	Vol	Left Turns	Through	Right Turns	App	Veh	Vol	Left Turns	Through	Right Turns								
N	Car	101	98%	10	10%	89	88%	2	2%	S	Car	85	98%	7	8%	73	86%	5	6%
	Trk	2	2%	0	0%	2	100%	0	0%		Trk	2	2%	0	0%	2	100%	0	0%
	Tot	103	100%	10	10%	91	88%	2	2%		Tot	87	100%	7	8%	75	86%	5	6%
S	Car	112	100%	4	4%	93	83%	15	13%	E	Car	75	100%	7	9%	61	81%	7	9%
	Trk	0	0%	0	0	0	0	0	0		Trk	0	0%	0	0	0	0	0	0
	Tot	112	100%	4	4%	93	83%	15	13%		Tot	75	100%	7	9%	61	81%	7	9%
E	Car	63	100%	29	46%	9	14%	25	40%	W	Car	30	94%	13	43%	5	17%	12	40%
	Trk	0	0%	0	0	0	0	0	0		Trk	2	6%	1	50%	0	0%	1	50%
	Tot	63	100%	29	46%	9	14%	25	40%		Tot	32	100%	14	44%	5	16%	13	41%
W	Car	46	100%	6	13%	20	43%	20	43%	Tot	Car	25	96%	5	20%	10	40%	10	40%
	Trk	0	0%	0	0	0	0	0	0		Trk	1	4%	0	0%	0	0%	1	100%
	Tot	46	100%	6	13%	20	43%	20	43%		Tot	26	100%	5	19%	10	38%	11	42%
Peak Time: 11:00 AM North Approach Total Intersection: 304								Peak Time: 7:15 AM East Approach Total Intersection: 289											
App	Veh	Vol	Left Turns	Through	Right Turns	App	Veh	Vol	Left Turns	Through	Right Turns								
N	Car	127	100%	14	11%	97	76%	16	13%	S	Car	82	100%	10	12%	71	87%	1	1%
	Trk	0	0%	0	0	0	0	0	0		Trk	0	0%	0	0	0	0	0	0
	Tot	127	100%	14	11%	97	76%	16	13%		Tot	82	100%	10	12%	71	87%	1	1%
S	Car	110	99%	14	13%	86	78%	10	9%	E	Car	101	100%	5	5%	82	81%	14	14%
	Trk	1	1%	0	0%	1	100%	0	0%		Trk	0	0%	0	0	0	0	0	0
	Tot	111	100%	14	13%	87	78%	10	9%		Tot	101	100%	5	5%	82	81%	14	14%
E	Car	34	94%	14	41%	6	18%	14	41%	W	Car	65	100%	29	45%	11	17%	25	38%
	Trk	2	6%	1	50%	0	0%	1	50%		Trk	0	0%	0	0	0	0	0	0
	Tot	36	100%	15	42%	6	17%	15	42%		Tot	65	100%	29	45%	11	17%	25	38%
W	Car	30	100%	8	27%	9	30%	13	43%	Tot	Car	41	100%	6	15%	18	44%	17	41%
	Trk	0	0%	0	0	0	0	0	0		Trk	0	0%	0	0	0	0	0	0
	Tot	30	100%	8	27%	9	30%	13	43%		Tot	41	100%	6	15%	18	44%	17	41%
Peak Time: 7:30 AM South Approach Total Intersection: 324								Peak Time: 7:30 AM West Approach Total Intersection: 324											
App	Veh	Vol	Left Turns	Through	Right Turns	App	Veh	Vol	Left Turns	Through	Right Turns								
N	Car	101	98%	10	10%	89	88%	2	2%	S	Car	101	98%	10	10%	89	88%	2	2%
	Trk	2	2%	0	0%	2	100%	0	0%		Trk	2	2%	0	0%	2	100%	0	0%
	Tot	103	100%	10	10%	91	88%	2	2%		Tot	103	100%	10	10%	91	88%	2	2%
S	Car	112	100%	4	4%	93	83%	15	13%	E	Car	112	100%	4	4%	93	83%	15	13%
	Trk	0	0%	0	0	0	0	0	0		Trk	0	0%	0	0	0	0	0	0
	Tot	112	100%	4	4%	93	83%	15	13%		Tot	112	100%	4	4%	93	83%	15	13%

E	Car	63	100%	29	46%	9	14%	25	40%	E	Car	63	100%	29	46%	9	14%	25	40%
	Trk	0	0%	0		0		0			Trk	0	0%	0		0		0	
	Tot	63	100%	29	46%	9	14%	25	40%		Tot	63	100%	29	46%	9	14%	25	40%
W	Car	46	100%	6	13%	20	43%	20	43%	W	Car	46	100%	6	13%	20	43%	20	43%
	Trk	0	0%	0		0		0			Trk	0	0%	0		0		0	
	Tot	46	100%	6	13%	20	43%	20	43%		Tot	46	100%	6	13%	20	43%	20	43%

Pedestrian Volumes 6-Hour Total									
Ped	N	S	Tots N-S	E	W	Tots E-W	Total		
Adult	11	17	28	5	16	21	49		
Child	2	2	4	1	1	2	6		

Left Turn Peak Quarter			
App	Began	Tot Left	
N	11:30 AM	6	
S	11:15 AM	5	
E	7:45 AM	18	
W	9:00 AM	6	

Los Angeles County Department of Public Works

Turning Movement Count

Report ID: 48

Access Date: 5/3/21 1:26 PM

Count Date: 2/20/2018 Tuesday

Counted By: Brian K Oliver

Int.: CALIFORNIA AVENUE at GIORDANO STREET

Conditions: Clear

North Approach:	CALIFORNIA AVENUE	South Approach:	CALIFORNIA AVENUE
East Approach:	GIORDANO STREET	West Approach:	GIORDANO STREET

North Approach														South Approach													
Time	Cars			Trucks			Total Veh.			Ped. Across			15'	1 Hour	Trucks			Cars			Ped. Across			15'	1 Hour		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Adult	Child	Left			Thru	Right	Left	Thru	Right	Adult	Child						
12:00 PM	1	12	2	0	0	0	0	15	95	3	0	0	0	10	2	0	0	0	106	0	0	0	27	201			
12:15 PM	1	24	4	0	1	0	0	30	109	0	0	0	0	19	0	0	0	118	0	0	0	49	222				
12:30 PM	4	21	0	0	0	0	0	25	111	1	0	0	0	39	4	0	1	123	0	0	0	73	233				
12:45 PM	1	21	3	0	0	0	0	25	109	0	0	0	0	25	2	0	0	103	0	0	0	52	212				
1:00 PM	1	22	6	0	0	0	0	29	108	0	0	0	0	19	2	0	1	88	0	0	0	53	199				
1:15 PM	3	26	3	0	0	0	0	32	114	1	0	0	0	19	4	0	0	97	1	0	0	56	211				
1:30 PM	2	15	4	0	2	0	0	23	103	1	0	0	0	23	3	0	0	88	0	0	0	51	191				
1:45 PM	2	18	4	0	0	0	0	24	91	0	0	0	0	9	2	0	0	75	0	0	0	36	166				
2:00 PM	4	31	0	0	0	0	0	35	76	1	0	0	0	3	3	0	0	33	0	0	0	68	143				
2:15 PM	4	16	1	0	0	0	0	21	52	5	1	0	0	11	2	0	1	58	0	0	0	36	111				
2:30 PM	3	7	1	0	0	0	0	11	37	0	0	0	0	14	0	0	0	56	0	0	0	26	91				
2:45 PM	2	7	0	0	0	0	0	9	60	1	0	0	0	7	3	0	0	100	0	0	0	19	161				
3:00 PM	1	10	0	0	0	0	0	11	101	6	9	0	0	18	0	0	0	147	0	0	13	29	243				
3:15 PM	0	6	0	0	0	0	0	6	129	0	0	0	0	12	0	0	0	192	0	0	0	19	32				
3:30 PM	4	26	3	0	0	0	1	34	156	1	0	0	0	47	7	0	1	247	1	4	93	403					
3:45 PM	5	39	2	1	3	0	0	50	156	0	0	0	0	53	2	0	0	237	0	5	107	393					
4:00 PM	3	33	3	0	0	0	0	39	151	0	0	0	0	54	4	0	0	246	0	1	102	391					
4:15 PM	3	23	7	0	0	0	0	33	159	0	0	0	0	65	1	0	0	265	2	2	101	421					
4:30 PM	5	25	4	0	0	0	0	34	173	0	1	0	0	42	6	0	1	289	0	2	83	462					
4:45 PM	8	35	2	0	0	0	0	45	190	0	0	0	0	60	3	0	0	345	2	2	111	531					
5:00 PM	7	36	3	0	1	0	0	47	169	0	0	0	0	75	4	0	1	332	2	2	129	501					
5:15 PM	5	38	4	0	0	0	0	47	0	1	0	0	0	84	5	0	0	0	0	1	1	139					
5:30 PM	6	39	5	0	1	0	0	51	0	1	0	0	0	99	3	0	0	0	0	0	0	156					
5:45 PM	5	18	1	0	0	0	0	24	0	1	0	0	0	48	3	0	0	0	0	4	1	77					
S. Total	80	548	62	1	8	1	10	700		23	11	40	879	65	0	2	6			13	33	46	1692				

East Approach										West Approach									
Cars					Trucks					Cars					Trucks				
Time	Left	Thru	Right		Left	Thru	Right			Left	Thru	Right			Left	Thru	Right		
	Total Veh.				Ped. Across					Total Veh.				Ped. Across					
	15'	1 Hour	15'	1 Hour	Adult	Child				15'	1 Hour	15'	1 Hour	Adult	Child			15'	1 Hour
12:00 PM	1	0	3	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	7
12:15 PM	1	5	1	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	15
12:30 PM	2	2	1	0	0	0	0	0	0	2	5	2	0	0	0	0	0	0	63
12:45 PM	0	2	2	0	0	0	0	0	0	3	8	4	0	0	0	0	0	0	55
1:00 PM	2	3	1	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	47
1:15 PM	0	4	2	0	0	0	0	0	0	2	6	1	0	0	0	0	0	0	49
1:30 PM	0	3	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	49
1:45 PM	3	4	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	48
2:00 PM	2	2	4	0	0	0	0	0	0	0	2	6	0	0	0	0	0	0	42
2:15 PM	1	2	0	0	0	0	0	0	0	4	2	5	0	0	0	12	23	0	40
2:30 PM	1	0	0	0	0	0	0	0	0	1	2	1	1	0	0	5	12	3	6

[illegible]

Los Angeles County Department of Public Works Turning Movement Count

Access Date: 5/3/21 1:26 PM

Report ID: 48

Count Date: 2/20/2018 Tuesday

Counted By: Brian K Oliver

Int.: CALIFORNIA AVENUE at GIORDANO STREET

Conditions: Clear

North Approach: East Approach:		CALIFORNIA AVENUE GIORDANO STREET		South Approach: West Approach:		CALIFORNIA AVENUE GIORDANO STREET	
Peak Time: 4:45 PM Intersection Peak Volume Total: 621							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	188	99%	26	14%	148	79%
	Trk	2	1%	0	0%	2	100%
	Tot	190	100%	26	14%	150	79%
S	Car	344	100%	11	3%	318	92%
	Trk	1	0%	0	0%	1	100%
	Tot	345	100%	11	3%	319	92%
E	Car	49	100%	14	29%	17	35%
	Trk	0	0%	0	0%	0	0%
	Tot	49	100%	14	29%	17	35%
W	Car	37	100%	7	19%	18	49%
	Trk	0	0%	0	0%	0	0%
	Tot	37	100%	7	19%	18	49%
Peak Time: 4:45 PM North Approach Total Intersection: 621							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	188	99%	26	14%	148	79%
	Trk	2	1%	0	0%	2	100%
	Tot	190	100%	26	14%	150	79%
S	Car	344	100%	11	3%	318	92%
	Trk	1	0%	0	0%	1	100%
	Tot	345	100%	11	3%	319	92%
E	Car	49	100%	14	29%	17	35%
	Trk	0	0%	0	0%	0	0%
	Tot	49	100%	14	29%	17	35%
W	Car	37	100%	7	19%	18	49%
	Trk	0	0%	0	0%	0	0%
	Tot	37	100%	7	19%	18	49%
Peak Time: 4:45 PM South Approach Total Intersection: 621							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	188	99%	26	14%	148	79%
	Trk	2	1%	0	0%	2	100%
	Tot	190	100%	26	14%	150	79%
S	Car	344	100%	11	3%	318	92%
	Trk	1	0%	0	0%	1	100%
	Tot	345	100%	11	3%	319	92%
Peak Time: 4:45 PM East Approach Total Intersection: 621							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	188	99%	26	14%	148	79%
	Trk	2	1%	0	0%	2	100%
	Tot	190	100%	26	14%	150	79%
S	Car	344	100%	11	3%	318	92%
	Trk	1	0%	0	0%	1	100%
	Tot	345	100%	11	3%	319	92%
E	Car	49	100%	14	29%	17	35%
	Trk	0	0%	0	0%	0	0%
	Tot	49	100%	14	29%	17	35%
W	Car	37	100%	7	19%	18	49%
	Trk	0	0%	0	0%	0	0%
	Tot	37	100%	7	19%	18	49%
Peak Time: 3:00 PM East Approach Total Intersection: 320							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	96	95%	10	10%	81	84%
	Trk	5	5%	1	20%	3	60%
	Tot	101	100%	11	11%	84	83%
S	Car	145	99%	6	4%	130	90%
	Trk	2	1%	0	0%	1	50%
	Tot	147	100%	6	4%	131	89%
E	Car	48	92%	8	17%	16	33%
	Trk	4	8%	2	50%	2	50%
	Tot	52	100%	10	19%	18	35%
W	Car	19	95%	3	16%	12	63%
	Trk	1	5%	0	0%	1	100%
	Tot	20	100%	3	15%	13	65%
Peak Time: 4:00 PM West Approach Total Intersection: 487							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	151	100%	19	13%	116	77%
	Trk	0	0%	0	0	0	0
	Tot	151	100%	19	13%	116	77%
S	Car	245	100%	10	4%	221	90%
	Trk	1	0%	0	0%	1	100%
	Tot	246	100%	10	4%	222	90%
Six-Hour Average Hourly Volume Total: 341							
App	Veh	Vol	Left Turns	Through	Right Turns		
N	Car	114	99%	13	11%	91	80%
	Trk	1	1%	0	0%	1	100%
	Tot	115	100%	13	11%	92	80%
S	Car	160	99%	7	4%	142	89%
	Trk	1	1%	0	0%	1	100%
	Tot	161	100%	7	4%	143	89%
E	Car	32	97%	7	22%	13	41%
	Trk	1	3%	1	100%	0	0%
	Tot	33	100%	8	24%	13	39%
W	Car	31	97%	7	23%	15	48%
	Trk	1	3%	0	0%	1	100%
	Tot	32	100%	7	22%	16	50%

E	Car	49	100%	14	29%	17	35%	18	37%	E				Car	41	100%	8	20%	16	39%	17	41%
	Trk	0	0%	0		0		0		Trk				Trk	0	0%	0		0		0	
	Tot	49	100%	14	29%	17	35%	18	37%	Tot				Tot	41	100%	8	20%	16	39%	17	41%
W	Car	37	100%	7	19%	18	49%	12	32%	W				Car	46	94%	13	28%	22	48%	11	24%
	Trk	0	0%	0		0		0		Trk				Trk	3	6%	0	0%	2	67%	1	33%
	Tot	37	100%	7	19%	18	49%	12	32%	Tot				Tot	49	100%	13	27%	24	49%	12	24%

Pedestrian Volumes 6-Hour Total									
Ped	N	S	Tots N-S	E	W	Tots E-W	Total		
Adult	23	13	36	9	24	33	69		
Child	11	33	44	2	8	10	54		

Left Turn Peak Quarter			
App	Began	Tot Left	
N	4:45 PM	8	
S	4:00 PM	5	
E	5:30 PM	4	
W	4:00 PM	6	

National Data & Surveying ServicesIntersection Turning Movement Count

Location: N California Ave & Amar Rd
City: La Puente
Control: Signalized

Project ID: 21-020151-001
Date: 5/22/2021

Data - Totals

NS/EW Streets:	N California Ave				N California Ave				Amar Rd				Amar Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
12:00 PM	8	24	17	0	13	15	11	0	9	175	7	0	8	170	11	0	468
12:15 PM	3	19	10	0	18	14	7	0	7	189	5	0	11	200	17	0	500
12:30 PM	3	19	11	0	8	15	7	0	12	190	4	0	10	205	13	0	497
12:45 PM	7	32	8	0	17	19	11	0	14	190	4	0	8	203	15	0	528
1:00 PM	4	20	4	0	15	23	8	0	12	184	3	0	8	202	13	0	496
1:15 PM	3	16	10	0	13	17	7	0	8	171	5	0	6	196	9	0	461
1:30 PM	8	30	4	0	6	17	9	0	9	174	9	0	8	186	14	0	474
1:45 PM	6	21	6	0	14	19	11	0	9	177	7	0	8	179	15	0	472
TOTAL VOLUMES :	NL 42	NT 181	NR 70	NU 0	SL 104	ST 139	SR 71	SU 0	EL 80	ET 1450	ER 44	EU 0	WL 67	WT 1541	WR 107	WU 0	TOTAL 3896
APPROACH %'s :	14.33%	61.77%	23.89%	0.00%	33.12%	44.27%	22.61%	0.00%	5.08%	92.12%	2.80%	0.00%	3.91%	89.85%	6.24%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	17	90	33	0	58	71	33	0	45	753	16	0	37	810	58	0	2021
PEAK HR FACTOR :	0.607	0.703	0.750	0.000	0.806	0.772	0.750	0.000	0.804	0.991	0.800	0.000	0.841	0.988	0.853	0.000	0.957
	0.745				0.862				0.978				0.992				

National Data & Surveying ServicesIntersection Turning Movement Count

Location: N California Ave & E Giordano St
City: La Puente
Control: 4-Way Stop

Project ID: 21-020151-002
Date: 5/22/2021

Data - Totals

NS/EW Streets:	N California Ave				N California Ave				E Giordano St				E Giordano St				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	4	32	2	0	4	17	4	0	6	0	5	0	2	1	6	0	
	12:00 PM																
	12:15 PM	4	29	6	0	4	19	4	0	4	1	6	0	4	1	3	
	12:30 PM	2	20	4	0	3	25	5	0	3	3	2	0	5	1	4	
	12:45 PM	4	37	3	0	3	22	3	0	4	2	2	0	3	3	4	
	1:00 PM	5	22	2	0	7	28	3	0	3	2	4	0	2	0	4	
	1:15 PM	3	27	3	0	5	18	4	0	3	4	1	0	2	2	1	
	1:30 PM	3	32	4	0	5	20	1	0	2	2	5	0	1	1	4	
	1:45 PM	6	22	3	0	8	26	3	0	8	1	5	0	2	2	4	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	31	221	27	0	39	175	27	0	33	15	30	0	21	11	30	0	660
	11.11%	79.21%	9.68%	0.00%	16.18%	72.61%	11.20%	0.00%	42.31%	19.23%	38.46%	0.00%	33.87%	17.74%	48.39%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	14	118	15	0	14	83	16	0	17	6	15	0	14	6	17	0	335
PEAK HR FACTOR :	0.875	0.797	0.625	0.000	0.875	0.830	0.800	0.000	0.708	0.500	0.625	0.000	0.700	0.500	0.708	0.000	0.931
	0.835				0.856				0.864				0.925				

National Data & Surveying ServicesIntersection Turning Movement Count

Location: N Sunset Ave & E Temple Ave
City: La Puente
Control: Signalized

Project ID: 21-020151-003
Date: 5/22/2021

Data - Totals

NS/EW Streets:	N Sunset Ave				N Sunset Ave				E Temple Ave				E Temple Ave				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
12:00 PM	25	118	19	0	11	130	27	0	36	113	36	0	17	87	16	0	635
12:15 PM	34	152	15	0	17	152	35	0	42	87	24	0	23	95	10	0	686
12:30 PM	31	162	22	0	20	114	33	0	35	102	26	0	19	87	21	0	672
12:45 PM	28	147	19	0	19	158	30	0	52	110	28	0	28	83	19	0	721
1:00 PM	24	180	22	0	17	128	32	0	39	86	18	0	21	83	19	0	669
1:15 PM	19	157	18	0	21	134	27	0	38	125	26	0	22	109	25	0	721
1:30 PM	20	145	21	0	20	141	36	1	51	87	13	0	22	77	19	0	653
1:45 PM	31	166	19	0	24	156	34	0	39	113	32	0	23	98	28	0	763
TOTAL VOLUMES :	NL 212	NT 1227	NR 155	NU 0	SL 149	ST 1113	SR 254	SU 1	EL 332	ET 823	ER 203	EU 0	WL 175	WT 719	WR 157	WU 0	TOTAL 5520
APPROACH %'s :	13.30%	76.98%	9.72%	0.00%	9.82%	73.37%	16.74%	0.07%	24.45%	60.60%	14.95%	0.00%	16.65%	68.41%	14.94%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	94	648	80	0	82	559	129	1	167	411	89	0	88	367	91	0	2806
PEAK HR FACTOR :	0.758	0.900	0.909	0.000	0.854	0.896	0.896	0.250	0.819	0.822	0.695	0.000	0.957	0.842	0.813	0.000	0.919
		0.909				0.901				0.882				0.875			

National Data & Surveying ServicesIntersection Turning Movement Count

Location: N California Ave & E Temple Ave
City: La Puente
Control: Signalized

Project ID: 21-020151-004
Date: 5/22/2021

Data - Totals

NS/EW Streets:	N California Ave				N California Ave				E Temple Ave				E Temple Ave				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
12:00 PM	6	16	3	0	10	10	9	0	12	122	3	0	4	95	3	0	293
12:15 PM	3	16	5	0	4	13	9	0	9	104	5	0	3	124	6	0	301
12:30 PM	6	27	5	0	4	16	11	0	8	122	4	0	2	114	4	0	323
12:45 PM	6	26	5	0	3	15	8	0	9	139	4	0	5	111	8	0	339
1:00 PM	9	12	5	0	5	23	6	0	7	116	2	0	6	114	4	0	309
1:15 PM	12	23	6	0	5	13	4	0	9	146	6	0	4	128	8	0	364
1:30 PM	7	24	3	0	7	15	7	0	9	121	10	0	6	110	7	0	326
1:45 PM	3	17	9	0	11	14	10	0	10	143	7	0	3	129	5	0	361
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	52	161	41	0	49	119	64	0	73	1013	41	0	33	925	45	0	2616
	20.47%	63.39%	16.14%	0.00%	21.12%	51.29%	27.59%	0.00%	6.48%	89.88%	3.64%	0.00%	3.29%	92.22%	4.49%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	31	76	23	0	28	65	27	0	35	526	25	0	19	481	24	0	1360
PEAK HR FACTOR :	0.646	0.792	0.639	0.000	0.636	0.707	0.675	0.000	0.875	0.901	0.625	0.000	0.792	0.932	0.750	0.000	0.934
	0.793				0.857				0.910				0.936				

APPENDIX C

Existing LOS Worksheets

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 1 EXAM

Report File: J:\...\Ex_AMv2.pdf

11/17/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Left	0.634	26.2	C
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.135	7.8	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	SB Right	0.819	67.0	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	SB Thru	0.439	33.4	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	WB Thru	0.011	0.0	A





V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 26.2
 Level Of Service: C
 Volume to Capacity (v/c): 0.634

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	28	88	20	82	79	48	42	605	8	17	1321	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	88	20	82	79	48	42	605	8	17	1321	45
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	22	5	21	20	12	11	151	2	4	330	11
Total Analysis Volume [veh/h]	28	88	20	82	79	48	42	605	8	17	1321	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.09	0.18	0.11	0.19	0.01	0.02	0.41	0.03
s, saturation flow rate [veh/h]	1461	1143	374	3204	1431	733	3204	1431
c, Capacity [veh/h]	224	188	233	2243	1001	506	2243	1001
d1, Uniform Delay [s]	53.78	58.39	20.25	7.21	5.88	9.87	9.95	6.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.58	98.81	1.70	0.30	0.01	0.12	1.14	0.08
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	0.61	1.11	0.18	0.27	0.01	0.03	0.59	0.04
d, Delay for Lane Group [s/veh]	65.36	157.20	21.94	7.51	5.90	10.00	11.10	6.12
Lane Group LOS	E	F	C	A	A	A	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.98	11.41	0.87	3.06	0.07	0.21	9.29	0.39
50th-Percentile Queue Length [ft/ln]	124.53	285.14	21.79	76.41	1.70	5.23	232.22	9.82
95th-Percentile Queue Length [veh/ln]	8.64	17.73	1.57	5.50	0.12	0.38	14.29	0.71
95th-Percentile Queue Length [ft/ln]	216.04	443.33	39.22	137.54	3.06	9.42	357.18	17.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.36	65.36	65.36	157.20	157.20	157.20	21.94	7.51	5.90	10.00	11.10	6.12
Movement LOS	E	E	E	F	F	F	C	A	A	A	B	A
d_A, Approach Delay [s/veh]	65.36			157.20			8.41			10.92		
Approach LOS	E			F			A			B		
d_I, Intersection Delay [s/veh]	26.17											
Intersection LOS	C											
Intersection V/C	0.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.873	1.979	2.842	2.925
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.784	1.904	2.100	2.701
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 7.8
 Level Of Service: A
 Volume to Capacity (v/c): 0.135

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	10	94	2	4	96	15	30	9	26	6	21	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	94	2	4	96	15	30	9	26	6	21	21
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	24	1	1	24	4	8	2	7	2	5	5
Total Analysis Volume [veh/h]	10	94	2	4	96	15	30	9	26	6	21	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	833	851	830	844
Degree of Utilization, x	0.13	0.14	0.08	0.06





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.44	0.47	0.25	0.18
95th-Percentile Queue Length [ft]	10.88	11.67	6.35	4.52
Approach Delay [s/veh]	7.95	7.89	7.70	7.52
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.82			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	67.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	120	591	57	93	1106	143	136	426	159	133	829	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	591	57	93	1106	143	136	426	159	133	829	85
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	148	14	23	277	36	34	107	40	33	207	21
Total Analysis Volume [veh/h]	120	591	57	93	1106	143	136	426	159	133	829	85
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.21	0.20	0.20	0.11	0.38	0.38	0.17	0.18	0.18	0.14	0.28	0.28
s, saturation flow rate [veh/h]	583	1683	1632	841	1683	1617	781	1683	1529	935	1683	1629
c, Capacity [veh/h]	168	640	620	333	640	614	313	640	581	416	640	619
d1, Uniform Delay [s]	53.10	47.77	47.79	33.58	61.75	61.96	34.74	46.97	47.03	29.60	53.09	53.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	22.54	2.94	3.04	2.08	34.01	36.09	4.35	2.55	2.83	2.02	7.06	7.29
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	0.71	0.51	0.51	0.28	0.99	1.00	0.43	0.48	0.48	0.32	0.73	0.73
d, Delay for Lane Group [s/veh]	75.64	50.71	50.83	35.66	95.76	98.05	39.10	49.52	49.87	31.62	60.15	60.39
Lane Group LOS	E	D	D	D	F	F	D	D	D	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.57	13.42	13.05	2.87	38.25	37.38	4.08	12.24	11.25	3.84	21.50	20.85
50th-Percentile Queue Length [ft/ln]	114.29	335.47	326.18	71.74	956.28	934.47	101.94	305.92	281.17	96.09	537.50	521.25
95th-Percentile Queue Length [veh/ln]	8.08	19.43	18.97	5.17	48.39	47.41	7.34	17.97	16.75	6.92	29.10	28.34
95th-Percentile Queue Length [ft/ln]	201.96	485.66	474.28	129.14	1209.8	1185.1	183.49	449.34	418.67	172.97	727.61	708.47

Movement, Approach, & Intersection Results

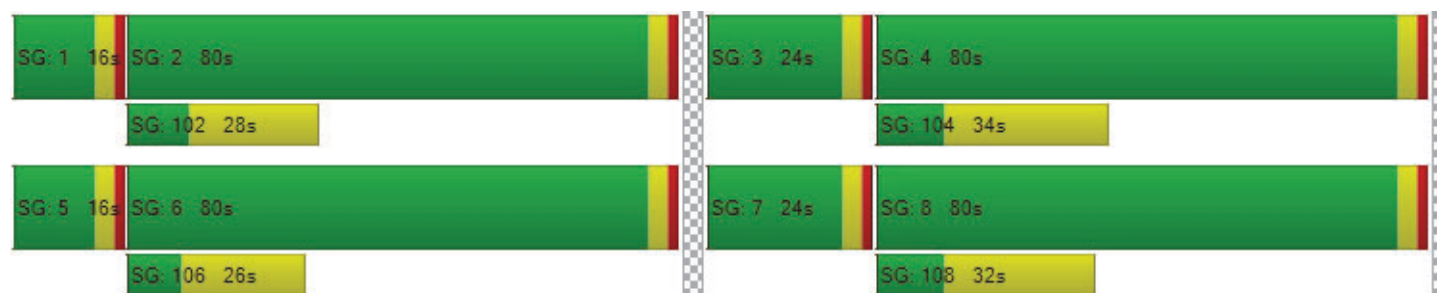
d_M, Delay for Movement [s/veh]	75.64	50.76	50.83	35.66	96.74	98.05	39.10	49.62	49.87	31.62	60.26	60.39
Movement LOS	E	D	D	D	F	F	D	D	D	C	E	E
d_A, Approach Delay [s/veh]	54.66			92.64			47.69			56.63		
Approach LOS	D			F			D			E		
d_I, Intersection Delay [s/veh]	67.04											
Intersection LOS	E											
Intersection V/C	0.819											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.832	2.831	2.757	2.705
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.193	2.667	2.154	2.423
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	33.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	22	71	12	34	62	39	26	554	26	15	991	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	71	12	34	62	39	26	554	26	15	991	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	18	3	9	16	10	7	139	7	4	248	4
Total Analysis Volume [veh/h]	22	71	12	34	62	39	26	554	26	15	991	15
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.07	0.09	0.03	0.17	0.17	0.01	0.30	0.30
s, saturation flow rate [veh/h]	1551	1491	842	1683	1657	1013	1683	1674
c, Capacity [veh/h]	480	463	495	720	709	637	720	717
d1, Uniform Delay [s]	35.74	36.54	12.86	26.12	26.14	9.60	30.83	30.83
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	1.59	0.20	1.69	1.73	0.07	5.60	5.63
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	0.22	0.29	0.05	0.41	0.41	0.02	0.70	0.70
d, Delay for Lane Group [s/veh]	36.79	38.13	13.06	27.82	27.86	9.67	36.43	36.46
Lane Group LOS	D	D	B	C	C	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.74	3.63	0.30	6.73	6.65	0.17	14.15	14.08
50th-Percentile Queue Length [ft/ln]	68.61	90.66	7.51	168.21	166.16	4.20	353.65	351.94
95th-Percentile Queue Length [veh/ln]	4.94	6.53	0.54	10.98	10.87	0.30	20.31	20.23
95th-Percentile Queue Length [ft/ln]	123.50	163.18	13.51	274.55	271.86	7.57	507.85	505.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.79	36.79	36.79	38.13	38.13	38.13	13.06	27.84	27.86	9.67	36.45	36.46
Movement LOS	D	D	D	D	D	D	B	C	C	A	D	D
d_A, Approach Delay [s/veh]	36.79			38.13			27.20			36.05		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	33.37											
Intersection LOS	C											
Intersection V/C	0.439											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0			15.0			16.0			16.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.85			51.85			50.97			50.97		
I_p,int, Pedestrian LOS Score for Intersection	1.841			1.867			2.669			2.679		
Crosswalk LOS	A			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	576			576			856			856		
d_b, Bicycle Delay [s]	33.47			33.47			21.59			21.59		
I_b,int, Bicycle LOS Score for Intersection	1.733			1.782			2.060			2.402		
Bicycle LOS	A			A			B			B		

Sequence

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






Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	576	1052	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	576	1052	0
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]	0	0	0	144	263	0
Total Analysis Volume [veh/h]	0	0	0	576	1052	0
Pedestrian Volume [ped/h]	0		0		0	

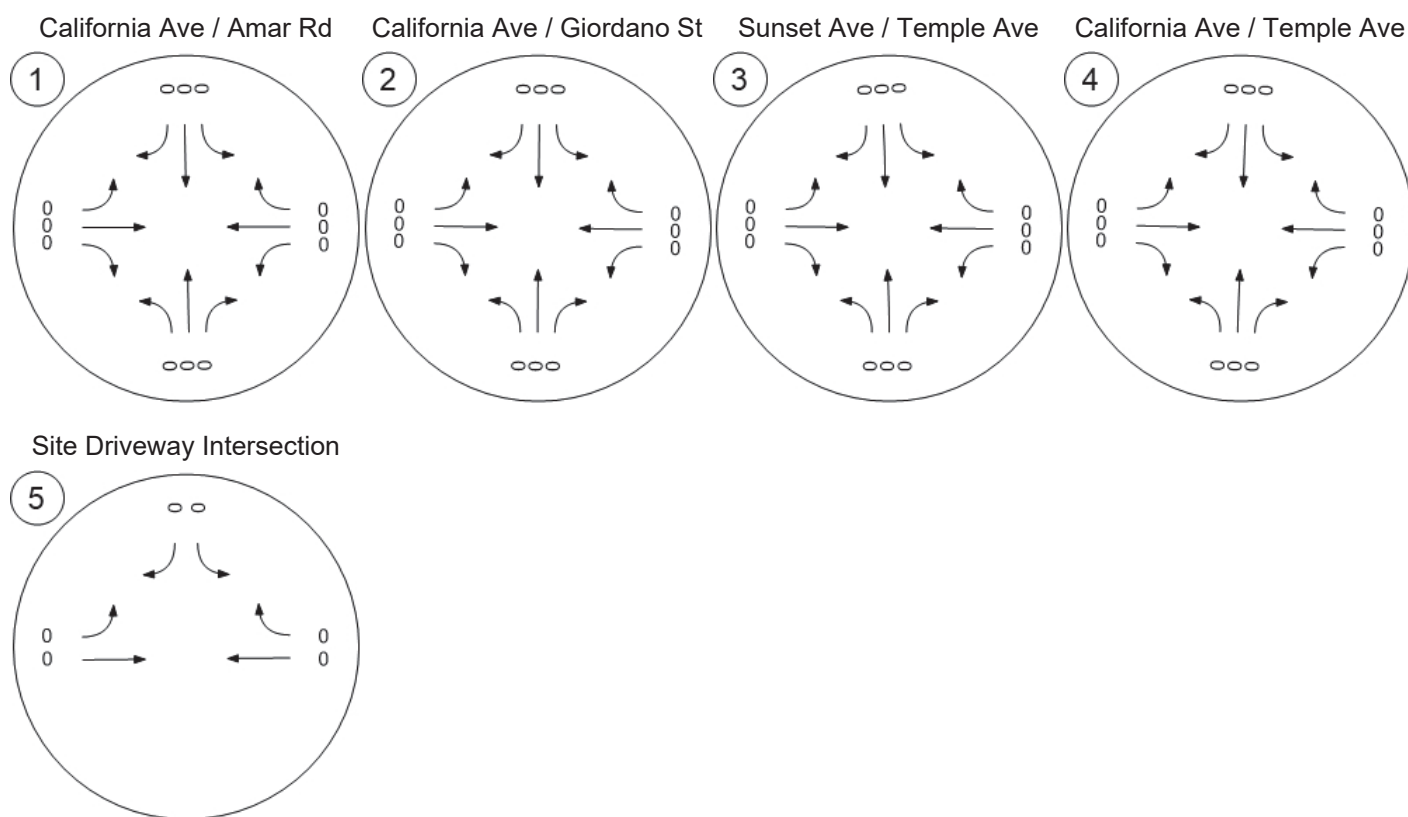
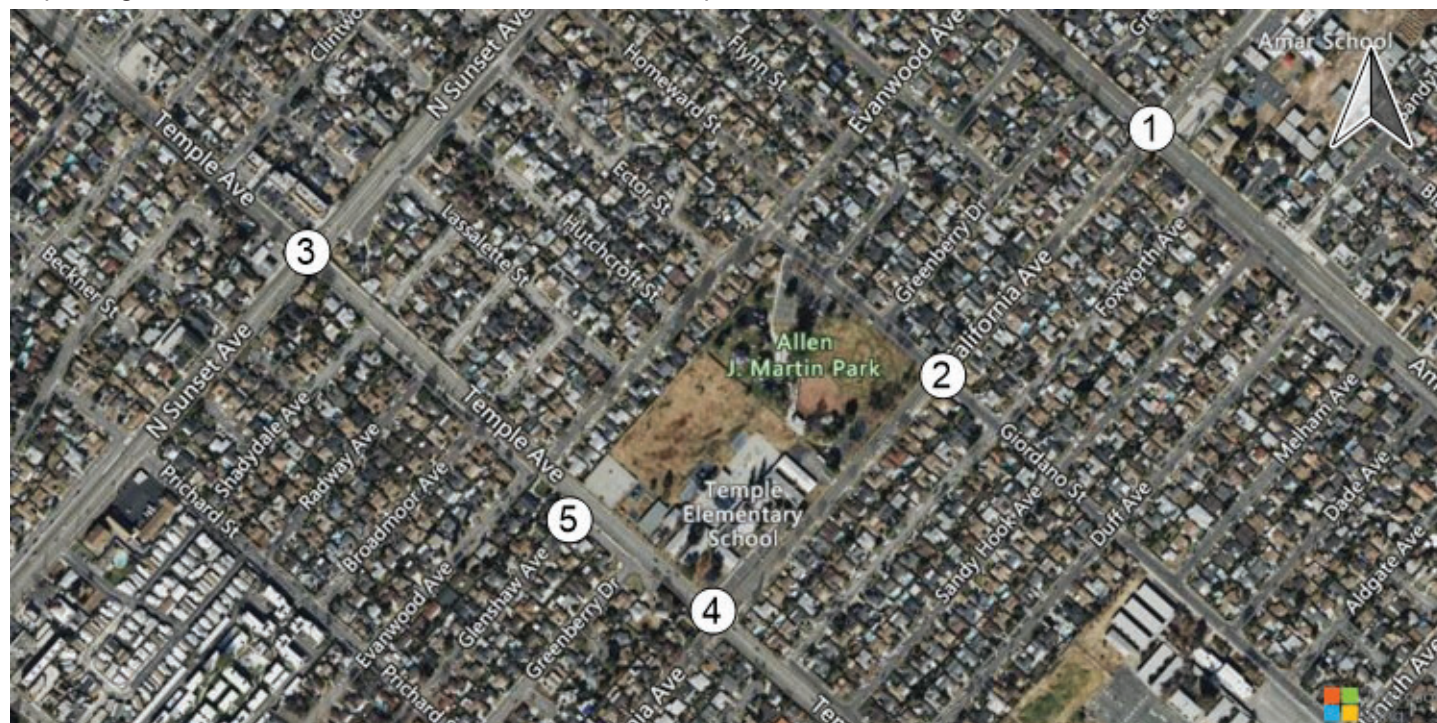
Intersection Settings

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	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	30.03	12.25	10.48	0.00	0.00	0.00
Movement LOS	D	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	21.14		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Report Figure 7209074d: Traffic Volume - Net New Site Trips



SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 2 EXPM

Report File: J:\...\Ex_PMv2.pdf

11/17/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	NB Thru	0.668	53.3	D
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	SB Thru	0.431	9.8	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.890	92.3	F
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.573	36.3	D
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	EB Thru	0.011	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.





Intersection Level Of Service Report

Intersection 1: California Ave / Amar Rd

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 53.3
 Level Of Service: D
 Volume to Capacity (v/c): 0.668

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	42	200	59	66	105	69	52	1298	36	27	978	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	200	59	66	105	69	52	1298	36	27	978	86
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	50	15	17	26	17	13	325	9	7	245	22
Total Analysis Volume [veh/h]	42	200	59	66	105	69	52	1298	36	27	978	86
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.21	0.22	0.10	0.41	0.03	0.07	0.31	0.06
s, saturation flow rate [veh/h]	1436	1084	518	3204	1431	382	3204	1431
c, Capacity [veh/h]	219	177	341	2243	1001	239	2243	1001
d1, Uniform Delay [s]	57.52	57.84	14.45	9.83	6.00	18.89	8.42	6.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	193.87	192.34	0.94	1.10	0.07	0.96	0.62	0.17
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	1.37	1.36	0.15	0.58	0.04	0.11	0.44	0.09
d, Delay for Lane Group [s/veh]	251.39	250.18	15.39	10.93	6.07	19.84	9.04	6.39
Lane Group LOS	F	F	B	B	A	B	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	19.09	15.34	0.86	9.01	0.31	0.52	5.79	0.77
50th-Percentile Queue Length [ft/ln]	477.36	383.50	21.41	225.32	7.80	13.12	144.69	19.36
95th-Percentile Queue Length [veh/ln]	29.72	24.46	1.54	13.94	0.56	0.94	9.73	1.39
95th-Percentile Queue Length [ft/ln]	743.12	611.49	38.54	348.41	14.05	23.62	243.32	34.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	251.39	251.39	251.39	250.18	250.18	250.18	15.39	10.93	6.07	19.84	9.04	6.39
Movement LOS	F	F	F	F	F	F	B	B	A	B	A	A
d_A, Approach Delay [s/veh]	251.39			250.18			10.97			9.10		
Approach LOS	F			F			B			A		
d_I, Intersection Delay [s/veh]	53.29											
Intersection LOS	D											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.999	2.088	2.931	2.972
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	2.056	1.956	2.703	2.460
Bicycle LOS	B	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 9.8
 Level Of Service: A
 Volume to Capacity (v/c): 0.431

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	27	155	14	11	329	15	14	18	19	7	19	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	155	14	11	329	15	14	18	19	7	19	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	39	4	3	82	4	4	5	5	2	5	3
Total Analysis Volume [veh/h]	27	155	14	11	329	15	14	18	19	7	19	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	793	824	710	706
Degree of Utilization, x	0.25	0.43	0.07	0.05





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.97	2.19	0.23	0.17
95th-Percentile Queue Length [ft]	24.28	54.76	5.78	4.26
Approach Delay [s/veh]	9.02	10.64	8.46	8.39
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	9.84			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	92.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.890

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	211	1267	211	104	794	160	207	825	133	83	466	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	1267	211	104	794	160	207	825	133	83	466	107
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	317	53	26	199	40	52	206	33	21	117	27
Total Analysis Volume [veh/h]	211	1267	211	104	794	160	207	825	133	83	466	107
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.30	0.44	0.46	0.20	0.29	0.29	0.22	0.29	0.29	0.11	0.18	0.18
s, saturation flow rate [veh/h]	693	1683	1601	517	1683	1586	942	1683	1603	764	1683	1576
c, Capacity [veh/h]	235	640	609	167	640	603	423	640	609	299	640	599
d1, Uniform Delay [s]	50.27	62.00	62.00	47.86	54.27	54.28	31.14	54.24	54.28	34.11	46.61	46.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	36.92	92.07	105.35	16.10	8.60	9.10	4.02	8.55	9.01	2.29	2.39	2.58
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	0.90	1.17	1.20	0.62	0.77	0.77	0.49	0.77	0.77	0.28	0.46	0.46
d, Delay for Lane Group [s/veh]	87.18	154.07	167.35	63.96	62.87	63.38	35.16	62.79	63.29	36.41	48.99	49.25
Lane Group LOS	F	F	F	E	E	E	D	E	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.00	48.91	48.78	3.76	23.41	22.16	6.39	23.35	22.37	2.37	11.71	11.08
50th-Percentile Queue Length [ft/ln]	225.07	1222.7	1219.5	94.12	585.18	553.96	159.72	583.82	559.23	59.24	292.75	277.11
95th-Percentile Queue Length [veh/ln]	13.92	67.26	68.15	6.78	31.34	29.88	10.53	31.28	30.13	4.27	17.32	16.54
95th-Percentile Queue Length [ft/ln]	348.08	1681.5	1703.6	169.41	783.54	746.95	263.36	781.95	753.15	106.63	433.05	413.62

Movement, Approach, & Intersection Results

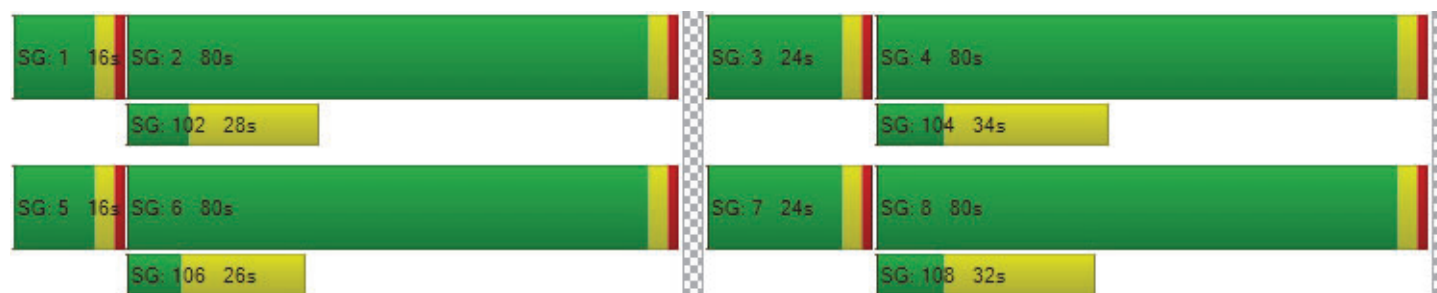
d_M, Delay for Movement [s/veh]	87.18	159.52	167.35	63.96	63.07	63.38	35.16	62.99	63.29	36.41	49.09	49.25
Movement LOS	F	F	F	E	E	E	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	151.46			63.20			58.08			47.51		
Approach LOS	F			E			E			D		
d_I, Intersection Delay [s/veh]	92.28											
Intersection LOS	F											
Intersection V/C	0.890											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.908	2.965	2.845	2.744
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.953	2.432	2.521	2.101
Bicycle LOS	C	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	36.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	35	197	55	29	112	25	53	1062	30	34	587	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	197	55	29	112	25	53	1062	30	34	587	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	49	14	7	28	6	13	266	8	9	147	9
Total Analysis Volume [veh/h]	35	197	55	29	112	25	53	1062	30	34	587	34
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.18	0.12	0.05	0.33	0.33	0.04	0.19	0.19
s, saturation flow rate [veh/h]	1571	1426	993	1683	1667	815	1683	1651
c, Capacity [veh/h]	483	443	620	720	713	472	720	707
d1, Uniform Delay [s]	40.68	37.27	10.06	32.03	32.04	14.18	26.53	26.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.31	2.42	0.27	7.46	7.54	0.30	1.91	1.95
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	0.59	0.38	0.09	0.76	0.76	0.07	0.43	0.44
d, Delay for Lane Group [s/veh]	45.99	39.69	10.33	39.49	39.57	14.48	28.44	28.49
Lane Group LOS	D	D	B	D	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.83	4.59	0.61	16.21	16.08	0.40	7.34	7.23
50th-Percentile Queue Length [ft/ln]	220.72	114.79	15.30	405.33	401.97	9.92	183.54	180.68
95th-Percentile Queue Length [veh/ln]	13.70	8.11	1.10	22.82	22.65	0.71	11.79	11.64
95th-Percentile Queue Length [ft/ln]	342.54	202.64	27.53	570.42	566.37	17.86	294.63	290.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.99	45.99	45.99	39.69	39.69	39.69	10.33	39.53	39.57	14.48	28.46	28.49
Movement LOS	D	D	D	D	D	D	B	D	D	B	C	C
d_A, Approach Delay [s/veh]	45.99			39.69			38.18			27.74		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	36.25											
Intersection LOS	D											
Intersection V/C	0.573											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0			15.0			16.0			16.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.85			51.85			50.97			50.97		
I_p,int, Pedestrian LOS Score for Intersection	1.978			1.983			2.714			2.707		
Crosswalk LOS	A			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	576			576			856			856		
d_b, Bicycle Delay [s]	33.47			33.47			21.59			21.59		
I_b,int, Bicycle LOS Score for Intersection	2.033			1.834			2.504			2.100		
Bicycle LOS	B			A			B			B		

Sequence

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






Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 0.0
 Level Of Service: A
 Volume to Capacity (v/c): 0.011

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	1140	647	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1140	647	0
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]	0	0	0	285	162	0
Total Analysis Volume [veh/h]	0	0	0	1140	647	0
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	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	25.78	10.36	8.85	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.07		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 3 EXSatMD

Report File: J:\...\EXSatMDv2.pdf

11/17/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Thru	0.649	38.2	D
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.251	8.5	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.706	58.0	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.406	31.6	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition		0.000	0.0	





V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 38.2
 Level Of Service: D
 Volume to Capacity (v/c): 0.649

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	24	128	47	82	101	47	64	1071	23	53	1152	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	128	47	82	101	47	64	1071	23	53	1152	82
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	32	12	21	25	12	16	268	6	13	288	21
Total Analysis Volume [veh/h]	24	128	47	82	101	47	64	1071	23	53	1152	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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.13	0.25	0.15	0.33	0.02	0.11	0.36	0.06
s, saturation flow rate [veh/h]	1530	923	439	3204	1431	474	3204	1431
c, Capacity [veh/h]	231	158	282	2243	1001	309	2243	1001
d1, Uniform Delay [s]	56.29	58.20	17.81	8.79	5.95	15.89	9.13	6.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	31.96	235.62	1.86	0.73	0.04	1.21	0.84	0.16
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	0.86	1.45	0.23	0.48	0.02	0.17	0.51	0.08
d, Delay for Lane Group [s/veh]	88.25	293.82	19.67	9.52	5.99	17.10	9.98	6.37
Lane Group LOS	F	F	B	A	A	B	A	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.57	15.62	1.24	6.62	0.20	0.94	7.41	0.74
50th-Percentile Queue Length [ft/ln]	214.22	390.38	30.97	165.54	4.94	23.38	185.29	18.40
95th-Percentile Queue Length [veh/ln]	13.37	25.31	2.23	10.84	0.36	1.68	11.88	1.32
95th-Percentile Queue Length [ft/ln]	334.24	632.76	55.74	271.04	8.89	42.09	296.91	33.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	88.25	88.25	88.25	293.82	293.82	293.82	19.67	9.52	5.99	17.10	9.98	6.37
Movement LOS	F	F	F	F	F	F	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	88.25			293.82			10.01			10.04		
Approach LOS	F			F			B			B		
d_I, Intersection Delay [s/veh]	38.15											
Intersection LOS	D											
Intersection V/C	0.649											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.990	2.069	2.890	2.990
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.888	1.939	2.515	2.621
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.5
 Level Of Service: A
 Volume to Capacity (v/c): 0.251

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	20	168	21	20	118	23	24	9	21	20	9	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	168	21	20	118	23	24	9	21	20	9	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	42	5	5	30	6	6	2	5	5	2	6
Total Analysis Volume [veh/h]	20	168	21	20	118	23	24	9	21	20	9	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	832	826	767	776
Degree of Utilization, x	0.25	0.19	0.07	0.07

Movement, Approach, & Intersection Results





95th-Percentile Queue Length [veh]	0.99	0.72	0.23	0.22
95th-Percentile Queue Length [ft]	24.87	18.01	5.66	5.49
Approach Delay [s/veh]	8.78	8.41	8.05	7.98
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.48			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	58.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	134	922	114	118	795	183	238	585	127	125	522	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	134	922	114	118	795	183	238	585	127	125	522	129
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	231	29	30	199	46	60	146	32	31	131	32
Total Analysis Volume [veh/h]	134	922	114	118	795	183	238	585	127	125	522	129
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	95.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.20	0.31	0.31	0.18	0.30	0.30	0.26	0.22	0.22	0.14	0.20	0.20
s, saturation flow rate [veh/h]	683	1683	1619	659	1683	1575	901	1683	1580	870	1683	1569
c, Capacity [veh/h]	228	640	615	216	640	599	393	640	601	372	640	596
d1, Uniform Delay [s]	41.38	56.00	56.04	42.09	54.91	54.94	33.01	49.17	49.17	30.80	48.04	48.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.59	11.57	12.06	9.55	9.58	10.22	6.76	3.72	3.96	2.42	3.08	3.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.83	0.83	0.55	0.79	0.79	0.61	0.57	0.57	0.34	0.53	0.53
d, Delay for Lane Group [s/veh]	51.97	67.57	68.10	51.64	64.50	65.16	39.78	52.89	53.13	33.23	51.12	51.39
Lane Group LOS	D	E	E	D	E	E	D	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.64	26.31	25.45	4.03	24.47	23.04	7.70	15.48	14.58	3.63	13.82	12.97
50th-Percentile Queue Length [ft/ln]	115.92	657.84	636.22	100.69	611.65	576.00	192.41	387.11	364.49	90.64	345.42	324.17
95th-Percentile Queue Length [veh/ln]	8.17	34.73	33.72	7.25	32.58	30.91	12.25	21.94	20.84	6.53	19.91	18.87
95th-Percentile Queue Length [ft/ln]	204.21	868.16	843.05	181.24	814.45	772.80	306.16	548.45	521.04	163.15	497.83	471.81

Movement, Approach, & Intersection Results

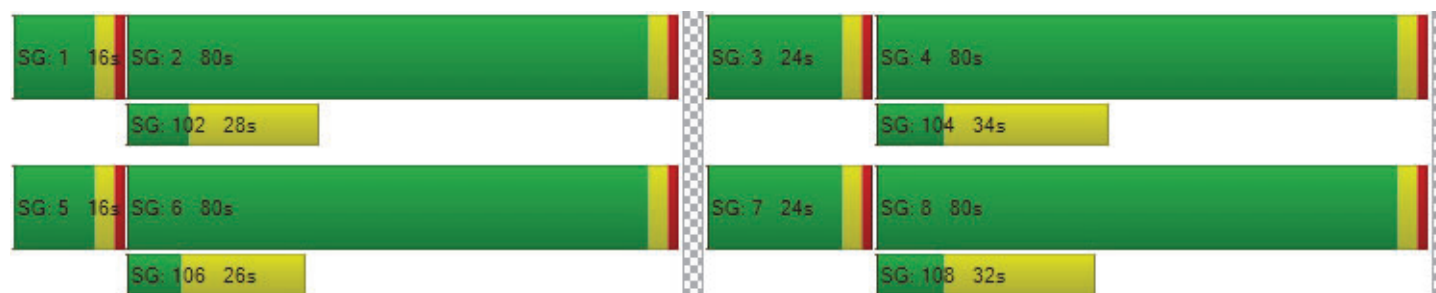
d_M, Delay for Movement [s/veh]	51.97	67.79	68.10	51.64	64.74	65.16	39.78	52.98	53.13	33.23	51.22	51.39
Movement LOS	D	E	E	D	E	E	D	D	D	C	D	D
d_A, Approach Delay [s/veh]	66.01			63.40			49.69			48.35		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	57.98											
Intersection LOS	E											
Intersection V/C	0.706											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.838	2.933	2.760	2.713
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.525	2.464	2.343	2.200
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	44	108	33	40	92	38	50	748	36	27	684	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	108	33	40	92	38	50	748	36	27	684	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	27	8	10	23	10	13	187	9	7	171	9
Total Analysis Volume [veh/h]	44	108	33	40	92	38	50	748	36	27	684	34
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.05	0.23	0.23	0.03	0.21	0.22
s, saturation flow rate [veh/h]	1482	1461	950	1683	1656	923	1683	1655
c, Capacity [veh/h]	460	454	584	720	709	561	720	708
d1, Uniform Delay [s]	37.93	37.54	10.58	28.22	28.22	10.82	27.51	27.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.60	2.35	0.29	2.99	3.04	0.16	2.49	2.54
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	0.40	0.37	0.09	0.55	0.55	0.05	0.50	0.50
d, Delay for Lane Group [s/veh]	40.53	39.89	10.87	31.21	31.26	10.98	30.00	30.05
Lane Group LOS	D	D	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.22	4.74	0.58	9.94	9.79	0.31	8.84	8.71
50th-Percentile Queue Length [ft/ln]	130.54	118.57	14.47	248.45	244.80	7.71	220.91	217.72
95th-Percentile Queue Length [veh/ln]	8.97	8.31	1.04	15.11	14.92	0.56	13.71	13.55
95th-Percentile Queue Length [ft/ln]	224.23	207.87	26.05	377.70	373.10	13.88	342.79	338.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.53	40.53	40.53	39.89	39.89	39.89	10.87	31.23	31.26	10.98	30.02	30.05
Movement LOS	D	D	D	D	D	D	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	40.53			39.89			30.01			29.34		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.63											
Intersection LOS	C											
Intersection V/C	0.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.913	1.938	2.689	2.677
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	1.865	1.840	2.248	2.174
Bicycle LOS	A	A	B	B

Sequence

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





Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0
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]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.52	8.32	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.42		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.01					
Intersection LOS						

APPENDIX D

Existing with-Project LOS Worksheets

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 10 EXSatMD_W_PROJ

Report File: J:\...\EXSatMD_W_PROJv2.pdf

11/17/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Thru	0.649	38.7	D
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.255	8.5	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.710	58.1	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.412	31.7	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	SB Left	0.008	8.7	A





V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 38.7
 Level Of Service: D
 Volume to Capacity (v/c): 0.649

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	24	128	47	82	101	47	64	1071	23	53	1152	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	1	1	0	2	0	0	0	1	1	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]	25	129	48	82	103	47	64	1071	24	54	1152	82
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	32	12	21	26	12	16	268	6	14	288	21
Total Analysis Volume [veh/h]	25	129	48	82	103	47	64	1071	24	54	1152	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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.13	0.25	0.15	0.33	0.02	0.11	0.36	0.06
s, saturation flow rate [veh/h]	1523	929	439	3204	1431	474	3204	1431
c, Capacity [veh/h]	230	159	282	2243	1001	309	2243	1001
d1, Uniform Delay [s]	56.45	58.19	17.81	8.79	5.95	15.93	9.13	6.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.39	237.87	1.86	0.73	0.04	1.23	0.84	0.16
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	0.88	1.46	0.23	0.48	0.02	0.18	0.51	0.08
d, Delay for Lane Group [s/veh]	90.84	296.06	19.67	9.52	5.99	17.16	9.98	6.37
Lane Group LOS	F	F	B	A	A	B	A	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	8.84	15.79	1.24	6.62	0.21	0.96	7.41	0.74
50th-Percentile Queue Length [ft/ln]	220.89	394.71	30.97	165.54	5.16	23.89	185.29	18.40
95th-Percentile Queue Length [veh/ln]	13.71	25.58	2.23	10.84	0.37	1.72	11.88	1.32
95th-Percentile Queue Length [ft/ln]	342.76	639.51	55.74	271.04	9.28	43.00	296.91	33.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	90.84	90.84	90.84	296.06	296.06	296.06	19.67	9.52	5.99	17.16	9.98	6.37
Movement LOS	F	F	F	F	F	F	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	90.84			296.06			10.01			10.05		
Approach LOS	F			F			B			B		
d_I, Intersection Delay [s/veh]	38.73											
Intersection LOS	D											
Intersection V/C	0.649											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.995	2.070	2.892	2.990
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.893	1.942	2.516	2.622
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.5
 Level Of Service: A
 Volume to Capacity (v/c): 0.255

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	20	168	21	20	118	23	24	9	21	20	9	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	4	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]	20	171	21	20	122	23	24	9	21	20	9	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	43	5	5	31	6	6	2	5	5	2	6
Total Analysis Volume [veh/h]	20	171	21	20	122	23	24	9	21	20	9	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	830	825	765	773
Degree of Utilization, x	0.26	0.20	0.07	0.07

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.02	0.74	0.23	0.22
95th-Percentile Queue Length [ft]	25.38	18.60	5.68	5.51
Approach Delay [s/veh]	8.82	8.46	8.06	8.00
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.52			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	58.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	134	922	114	118	795	183	238	585	127	125	522	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	2	0	0	0	3	0	3	2	2
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]	134	922	117	120	795	183	238	588	127	128	524	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	231	29	30	199	46	60	147	32	32	131	33
Total Analysis Volume [veh/h]	134	922	117	120	795	183	238	588	127	128	524	131
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	95.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.20	0.31	0.32	0.18	0.30	0.30	0.26	0.22	0.22	0.15	0.20	0.20
s, saturation flow rate [veh/h]	683	1683	1617	658	1683	1575	899	1683	1581	869	1683	1568
c, Capacity [veh/h]	228	640	615	215	640	599	392	640	601	371	640	596
d1, Uniform Delay [s]	41.38	56.08	56.12	42.30	54.91	54.94	33.08	49.22	49.22	30.92	48.12	48.15
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.59	11.75	12.26	10.00	9.58	10.22	6.85	3.76	4.00	2.53	3.12	3.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.83	0.83	0.56	0.79	0.79	0.61	0.58	0.58	0.34	0.53	0.53
d, Delay for Lane Group [s/veh]	51.97	67.83	68.38	52.31	64.50	65.16	39.93	52.98	53.22	33.45	51.24	51.52
Lane Group LOS	D	E	E	D	E	E	D	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.64	26.46	25.57	4.12	24.47	23.04	7.70	15.57	14.66	3.72	13.93	13.07
50th-Percentile Queue Length [ft/ln]	115.92	661.54	639.37	102.90	611.63	576.01	192.58	389.21	366.55	93.09	348.33	326.63
95th-Percentile Queue Length [veh/ln]	8.17	34.90	33.87	7.41	32.58	30.91	12.25	22.04	20.94	6.70	20.05	18.99
95th-Percentile Queue Length [ft/ln]	204.21	872.45	846.71	185.22	814.43	772.82	306.37	550.98	523.55	167.56	501.37	474.83

Movement, Approach, & Intersection Results

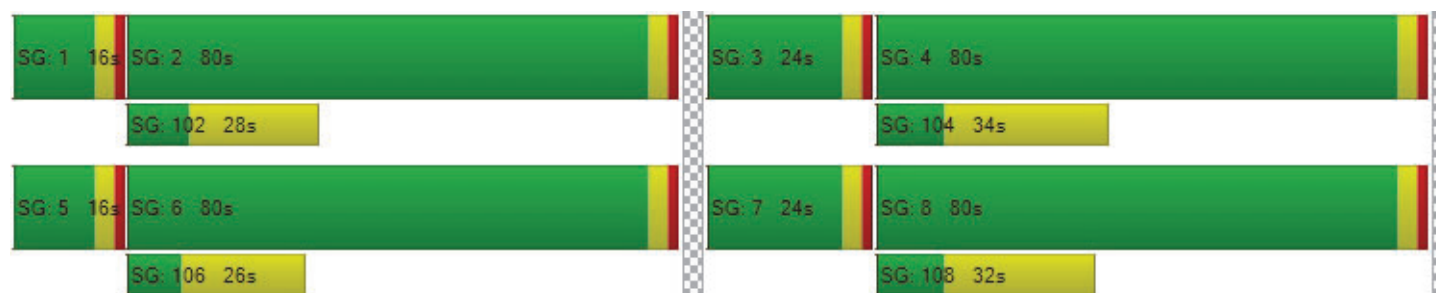
d_M, Delay for Movement [s/veh]	51.97	68.06	68.38	52.31	64.74	65.16	39.93	53.07	53.22	33.45	51.34	51.52
Movement LOS	D	E	E	D	E	E	D	D	D	C	D	D
d_A, Approach Delay [s/veh]	66.26			63.45			49.81			48.45		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	58.10											
Intersection LOS	E											
Intersection V/C	0.710											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.841	2.934	2.761	2.717
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.527	2.465	2.346	2.206
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.412

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	44	108	33	40	92	38	50	748	36	27	684	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	4	3	2	3	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	108	33	40	92	42	53	750	39	27	687	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	27	8	10	23	11	13	188	10	7	172	9
Total Analysis Volume [veh/h]	47	108	33	40	92	42	53	750	39	27	687	34
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.06	0.24	0.24	0.03	0.22	0.22
s, saturation flow rate [veh/h]	1462	1457	949	1683	1654	921	1683	1655
c, Capacity [veh/h]	455	453	583	720	708	559	720	708
d1, Uniform Delay [s]	38.11	37.67	10.62	28.28	28.28	10.86	27.54	27.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.76	2.46	0.31	3.04	3.09	0.16	2.51	2.56
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	0.41	0.38	0.09	0.55	0.55	0.05	0.50	0.50
d, Delay for Lane Group [s/veh]	40.86	40.12	10.93	31.31	31.37	11.02	30.05	30.10
Lane Group LOS	D	D	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.35	4.88	0.62	10.03	9.87	0.31	8.88	8.76
50th-Percentile Queue Length [ft/ln]	133.66	121.90	15.38	250.82	246.85	7.71	222.12	218.91
95th-Percentile Queue Length [veh/ln]	9.14	8.50	1.11	15.23	15.03	0.56	13.77	13.61
95th-Percentile Queue Length [ft/ln]	228.46	212.44	27.68	380.69	375.68	13.88	344.33	340.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.86	40.86	40.86	40.12	40.12	40.12	10.93	31.34	31.37	11.02	30.08	30.10
Movement LOS	D	D	D	D	D	D	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	40.86			40.12			30.06			29.39		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.74											
Intersection LOS	C											
Intersection V/C	0.412											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0			15.0			16.0			16.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.85			51.85			50.97			50.97		
I_p,int, Pedestrian LOS Score for Intersection	1.916			1.944			2.697			2.678		
Crosswalk LOS	A			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	576			576			856			856		
d_b, Bicycle Delay [s]	33.47			33.47			21.59			21.59		
I_b,int, Bicycle LOS Score for Intersection	1.870			1.847			2.254			2.177		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	6	8	0	0	10
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	6	8	0	0	10
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]	2	2	2	0	0	3
Total Analysis Volume [veh/h]	8	6	8	0	0	10
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	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.69	8.39	7.25	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.04	1.04	0.37	0.19	0.00	0.00
d_A, Approach Delay [s/veh]	8.56		7.25		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.56					
Intersection LOS	A					

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 4 EX_W_PROJ_AM

Report File: J:\...\Ex_W_Proj_AMV2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Thru	0.640	27.4	C
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.145	7.9	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	SB Right	0.820	67.1	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	SB Thru	0.449	33.5	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	SB Left	0.068	34.0	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	28	88	20	82	79	48	42	605	8	17	1321	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	1	1	0	4	0	0	0	2	2	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	89	21	82	83	48	42	605	10	19	1321	45
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	22	5	21	21	12	11	151	3	5	330	11
Total Analysis Volume [veh/h]	29	89	21	82	83	48	42	605	10	19	1321	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.10	0.19	0.11	0.19	0.01	0.03	0.41	0.03
s, saturation flow rate [veh/h]	1451	1133	374	3204	1431	733	3204	1431
c, Capacity [veh/h]	223	187	233	2243	1001	506	2243	1001
d1, Uniform Delay [s]	53.93	58.37	20.25	7.21	5.89	9.90	9.95	6.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.40	109.30	1.70	0.30	0.02	0.14	1.14	0.08
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	0.62	1.14	0.18	0.27	0.01	0.04	0.59	0.04
d, Delay for Lane Group [s/veh]	66.32	167.68	21.94	7.51	5.91	10.04	11.10	6.12
Lane Group LOS	E	F	C	A	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.14	11.86	0.87	3.06	0.09	0.23	9.29	0.39
50th-Percentile Queue Length [ft/ln]	128.39	296.49	21.79	76.41	2.13	5.86	232.22	9.82
95th-Percentile Queue Length [veh/ln]	8.85	18.52	1.57	5.50	0.15	0.42	14.29	0.71
95th-Percentile Queue Length [ft/ln]	221.30	463.00	39.22	137.54	3.83	10.56	357.18	17.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.32	66.32	66.32	167.68	167.68	167.68	21.94	7.51	5.91	10.04	11.10	6.12
Movement LOS	E	E	E	F	F	F	C	A	A	B	B	A
d_A, Approach Delay [s/veh]	66.32			167.68			8.41			10.92		
Approach LOS	E			F			A			B		
d_I, Intersection Delay [s/veh]	27.39											
Intersection LOS	C											
Intersection V/C	0.640											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.881	1.981	2.844	2.926
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.789	1.911	2.102	2.702
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 7.9
 Level Of Service: A
 Volume to Capacity (v/c): 0.145

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	10	94	2	4	96	15	30	9	26	6	21	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	8	0	0	0	1	1	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]	10	97	2	4	104	15	30	9	27	7	21	21
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	24	1	1	26	4	8	2	7	2	5	5
Total Analysis Volume [veh/h]	10	97	2	4	104	15	30	9	27	7	21	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	831	847	826	836
Degree of Utilization, x	0.13	0.15	0.08	0.06





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.45	0.51	0.26	0.19
95th-Percentile Queue Length [ft]	11.27	12.66	6.49	4.66
Approach Delay [s/veh]	7.99	7.97	7.73	7.57
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.87			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	67.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.820

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	120	591	57	93	1106	143	136	426	159	133	829	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	4	0	0	0	5	0	3	3	2
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	591	63	97	1106	143	136	431	159	136	832	87
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	148	16	24	277	36	34	108	40	34	208	22
Total Analysis Volume [veh/h]	120	591	63	97	1106	143	136	431	159	136	832	87
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.21	0.20	0.20	0.12	0.38	0.38	0.17	0.18	0.18	0.15	0.28	0.28
s, saturation flow rate [veh/h]	583	1683	1627	838	1683	1617	779	1683	1531	933	1683	1628
c, Capacity [veh/h]	168	640	618	330	640	614	311	640	582	414	640	619
d1, Uniform Delay [s]	53.12	47.90	47.91	33.75	61.75	61.97	34.87	47.05	47.12	29.71	53.21	53.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	22.54	3.00	3.11	2.25	34.00	36.10	4.41	2.59	2.87	2.11	7.20	7.44
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	0.71	0.52	0.52	0.29	0.99	1.00	0.44	0.48	0.48	0.33	0.73	0.73
d, Delay for Lane Group [s/veh]	75.66	50.90	51.03	36.00	95.75	98.07	39.28	49.64	49.99	31.82	60.41	60.65
Lane Group LOS	E	D	D	D	F	F	D	D	D	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.57	13.60	13.19	3.01	38.25	37.38	4.08	12.36	11.37	3.94	21.69	21.02
50th-Percentile Queue Length [ft/ln]	114.30	340.06	329.73	75.15	956.13	934.61	102.02	309.09	284.21	98.55	542.13	525.49
95th-Percentile Queue Length [veh/ln]	8.08	19.65	19.15	5.41	48.39	47.41	7.35	18.13	16.90	7.10	29.32	28.54
95th-Percentile Queue Length [ft/ln]	201.97	491.27	478.63	135.27	1209.6	1185.3	183.63	453.26	422.45	177.39	733.06	713.47

Movement, Approach, & Intersection Results

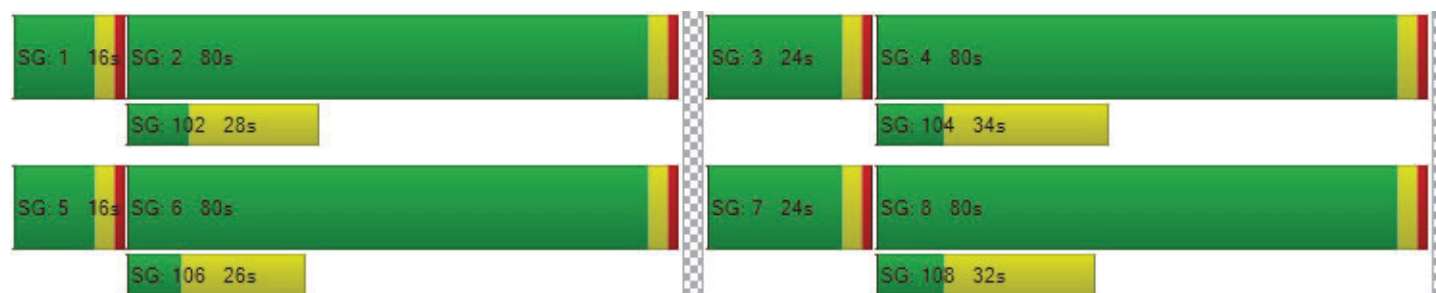
d_M, Delay for Movement [s/veh]	75.66	50.96	51.03	36.00	96.73	98.07	39.28	49.74	49.99	31.82	60.51	60.65
Movement LOS	E	D	D	D	F	F	D	D	D	C	E	E
d_A, Approach Delay [s/veh]	54.79			92.50			47.84			56.83		
Approach LOS	D			F			D			E		
d_I, Intersection Delay [s/veh]	67.06											
Intersection LOS	E											
Intersection V/C	0.820											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.836	2.833	2.759	2.711
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.198	2.670	2.159	2.430
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	22	71	12	34	62	39	26	554	26	15	991	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	10	3	3	3	0	5	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	71	12	34	62	49	29	557	29	15	996	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	18	3	9	16	12	7	139	7	4	249	4
Total Analysis Volume [veh/h]	28	71	12	34	62	49	29	557	29	15	996	15
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.03	0.18	0.18	0.01	0.30	0.30
s, saturation flow rate [veh/h]	1515	1489	840	1683	1654	1010	1683	1674
c, Capacity [veh/h]	470	462	493	720	708	634	720	717
d1, Uniform Delay [s]	35.89	36.82	12.96	26.18	26.20	9.63	30.90	30.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.18	1.77	0.23	1.72	1.76	0.07	5.69	5.72
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	0.24	0.31	0.06	0.41	0.41	0.02	0.70	0.70
d, Delay for Lane Group [s/veh]	37.06	38.59	13.19	27.91	27.96	9.70	36.58	36.61
Lane Group LOS	D	D	B	C	C	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.92	3.93	0.34	6.82	6.73	0.17	14.26	14.19
50th-Percentile Queue Length [ft/ln]	72.96	98.24	8.39	170.52	168.20	4.21	356.40	354.69
95th-Percentile Queue Length [veh/ln]	5.25	7.07	0.60	11.10	10.98	0.30	20.45	20.36
95th-Percentile Queue Length [ft/ln]	131.32	176.83	15.11	277.59	274.55	7.57	511.20	509.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.06	37.06	37.06	38.59	38.59	38.59	13.19	27.93	27.96	9.70	36.60	36.61
Movement LOS	D	D	D	D	D	D	B	C	C	A	D	D
d_A, Approach Delay [s/veh]	37.06			38.59			27.24			36.21		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	33.53											
Intersection LOS	C											
Intersection V/C	0.449											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.846	1.876	2.684	2.681
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	1.743	1.799	2.067	2.406
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 5: Site Driveway Intersection

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 34.0
 Level Of Service: D
 Volume to Capacity (v/c): 0.068

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	576	1052	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	8	15	0	0	21
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	8	15	576	1052	21
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]	2	2	4	144	263	5
Total Analysis Volume [veh/h]	9	8	15	576	1052	21
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	0.07	0.02	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	34.02	14.02	10.71	0.00	0.00	0.00
Movement LOS	D	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.07	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.87	6.87	1.78	0.89	0.00	0.00
d_A, Approach Delay [s/veh]	24.61		0.27		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.34					
Intersection LOS	D					

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 5 EX_W_PROJ_PM

Report File: J:\...\Ex_W_Proj_PMv2.pdf

11/17/2021

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	NB Thru	0.669	56.0	E
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	SB Thru	0.441	10.0	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.899	93.0	F
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.582	36.6	D
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	SB Left	0.125	30.1	D





V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	56.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	42	200	59	66	105	69	52	1298	36	27	978	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	2	0	3	0	0	0	2	2	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]	44	203	61	66	108	69	52	1298	38	29	978	86
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	51	15	17	27	17	13	325	10	7	245	22
Total Analysis Volume [veh/h]	44	203	61	66	108	69	52	1298	38	29	978	86
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.22	0.22	0.10	0.41	0.03	0.08	0.31	0.06
s, saturation flow rate [veh/h]	1424	1091	518	3204	1431	382	3204	1431
c, Capacity [veh/h]	218	178	341	2243	1001	239	2243	1001
d1, Uniform Delay [s]	57.53	57.83	14.45	9.83	6.01	18.99	8.42	6.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	210.98	196.40	0.94	1.10	0.07	1.04	0.62	0.17
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	1.41	1.37	0.15	0.58	0.04	0.12	0.44	0.09
d, Delay for Lane Group [s/veh]	268.51	254.24	15.39	10.93	6.08	20.03	9.04	6.39
Lane Group LOS	F	F	B	B	A	C	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	20.01	15.62	0.86	9.01	0.33	0.57	5.79	0.77
50th-Percentile Queue Length [ft/ln]	500.25	390.38	21.41	225.32	8.25	14.18	144.69	19.36
95th-Percentile Queue Length [veh/ln]	31.23	24.89	1.54	13.94	0.59	1.02	9.73	1.39
95th-Percentile Queue Length [ft/ln]	780.84	622.36	38.54	348.41	14.85	25.53	243.32	34.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	268.51	268.51	268.51	254.24	254.24	254.24	15.39	10.93	6.08	20.03	9.04	6.39
Movement LOS	F	F	F	F	F	F	B	B	A	C	A	A
d_A, Approach Delay [s/veh]	268.51			254.24			10.96			9.12		
Approach LOS	F			F			B			A		
d_I, Intersection Delay [s/veh]	55.96											
Intersection LOS	E											
Intersection V/C	0.669											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	2.009	2.090	2.935	2.972
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	2.068	1.961	2.705	2.461
Bicycle LOS	B	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type:	All-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.441

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	27	155	14	11	329	15	14	18	19	7	19	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	7	1	0	7	0	0	0	1	1	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]	28	162	15	11	336	15	14	18	20	8	19	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	41	4	3	84	4	4	5	5	2	5	3
Total Analysis Volume [veh/h]	28	162	15	11	336	15	14	18	20	8	19	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	791	821	706	698
Degree of Utilization, x	0.26	0.44	0.07	0.06





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.04	2.28	0.24	0.18
95th-Percentile Queue Length [ft]	25.88	56.99	5.95	4.43
Approach Delay [s/veh]	9.14	10.81	8.50	8.46
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	9.97			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	93.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	211	1267	211	104	794	160	207	825	133	83	466	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	3	0	0	0	5	0	7	5	4
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	1267	217	107	794	160	207	830	133	90	471	111
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	317	54	27	199	40	52	208	33	23	118	28
Total Analysis Volume [veh/h]	211	1267	217	107	794	160	207	830	133	90	471	111
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.30	0.45	0.46	0.21	0.29	0.29	0.22	0.29	0.29	0.12	0.18	0.18
s, saturation flow rate [veh/h]	693	1683	1599	515	1683	1586	937	1683	1603	762	1683	1574
c, Capacity [veh/h]	235	640	608	167	640	603	419	640	609	298	640	598
d1, Uniform Delay [s]	50.27	62.00	62.00	49.17	54.27	54.28	31.24	54.35	54.40	34.48	46.77	46.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	36.92	93.97	107.90	17.21	8.60	9.10	4.12	8.71	9.18	2.59	2.46	2.66
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	0.90	1.17	1.21	0.64	0.77	0.77	0.49	0.77	0.77	0.30	0.47	0.47
d, Delay for Lane Group [s/veh]	87.19	155.97	169.90	66.38	62.87	63.38	35.36	63.07	63.58	37.08	49.23	49.50
Lane Group LOS	F	F	F	E	E	E	D	E	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.00	49.25	49.16	3.91	23.41	22.16	6.40	23.54	22.56	2.59	11.95	11.29
50th-Percentile Queue Length [ft/ln]	225.07	1231.2	1228.8	97.74	585.16	553.97	159.91	588.44	563.90	64.71	298.80	282.28
95th-Percentile Queue Length [veh/ln]	13.92	67.85	68.82	7.04	31.34	29.88	10.54	31.49	30.35	4.66	17.62	16.80
95th-Percentile Queue Length [ft/ln]	348.09	1696.3	1720.5	175.93	783.52	746.97	263.61	787.36	758.63	116.48	440.55	420.05

Movement, Approach, & Intersection Results

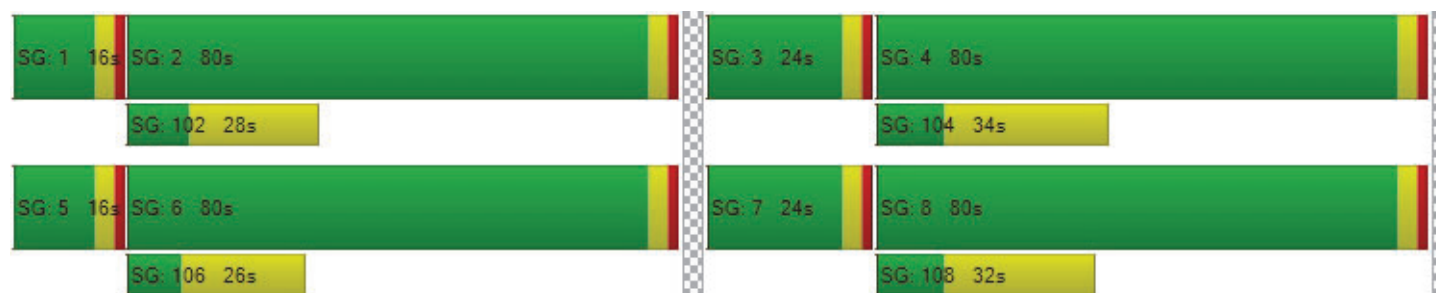
d_M, Delay for Movement [s/veh]	87.19	161.65	169.90	66.38	63.07	63.38	35.36	63.28	63.58	37.08	49.33	49.50
Movement LOS	F	F	F	E	E	E	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	153.43			63.45			58.37			47.72		
Approach LOS	F			E			E			D		
d_I, Intersection Delay [s/veh]	93.03											
Intersection LOS	F											
Intersection V/C	0.899											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.915	2.967	2.847	2.752
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.958	2.435	2.525	2.114
Bicycle LOS	C	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	35	197	55	29	112	25	53	1062	30	34	587	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	9	9	5	7	0	5	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	197	55	29	112	34	62	1067	37	34	592	34
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	49	14	7	28	9	16	267	9	9	148	9
Total Analysis Volume [veh/h]	41	197	55	29	112	34	62	1067	37	34	592	34
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.19	0.12	0.06	0.33	0.33	0.04	0.19	0.19
s, saturation flow rate [veh/h]	1566	1436	991	1683	1663	811	1683	1651
c, Capacity [veh/h]	482	445	618	720	712	469	720	707
d1, Uniform Delay [s]	40.84	37.53	10.16	32.22	32.23	14.39	26.58	26.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.61	2.60	0.32	7.80	7.91	0.30	1.93	1.98
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	0.61	0.39	0.10	0.77	0.77	0.07	0.44	0.44
d, Delay for Lane Group [s/veh]	46.45	40.13	10.48	40.02	40.13	14.69	28.51	28.57
Lane Group LOS	D	D	B	D	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.07	4.88	0.72	16.55	16.38	0.40	7.42	7.30
50th-Percentile Queue Length [ft/ln]	226.76	122.02	18.02	413.64	409.53	9.93	185.39	182.51
95th-Percentile Queue Length [veh/ln]	14.01	8.50	1.30	23.22	23.02	0.72	11.88	11.73
95th-Percentile Queue Length [ft/ln]	350.24	212.61	32.43	580.41	575.47	17.88	297.04	293.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.45	46.45	46.45	40.13	40.13	40.13	10.48	40.08	40.13	14.69	28.54	28.57
Movement LOS	D	D	D	D	D	D	B	D	D	B	C	C
d_A, Approach Delay [s/veh]	46.45			40.13			38.50			27.83		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	36.57											
Intersection LOS	D											
Intersection V/C	0.582											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.984	1.998	2.731	2.709
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	2.043	1.848	2.522	2.104
Bicycle LOS	B	A	B	B

Sequence

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





Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 30.1
 Level Of Service: D
 Volume to Capacity (v/c): 0.125

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	1140	647	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	16	14	0	0	20
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]	20	16	14	1140	647	20
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]	5	4	4	285	162	5
Total Analysis Volume [veh/h]	20	16	14	1140	647	20
Pedestrian Volume [ped/h]	0		0		0	

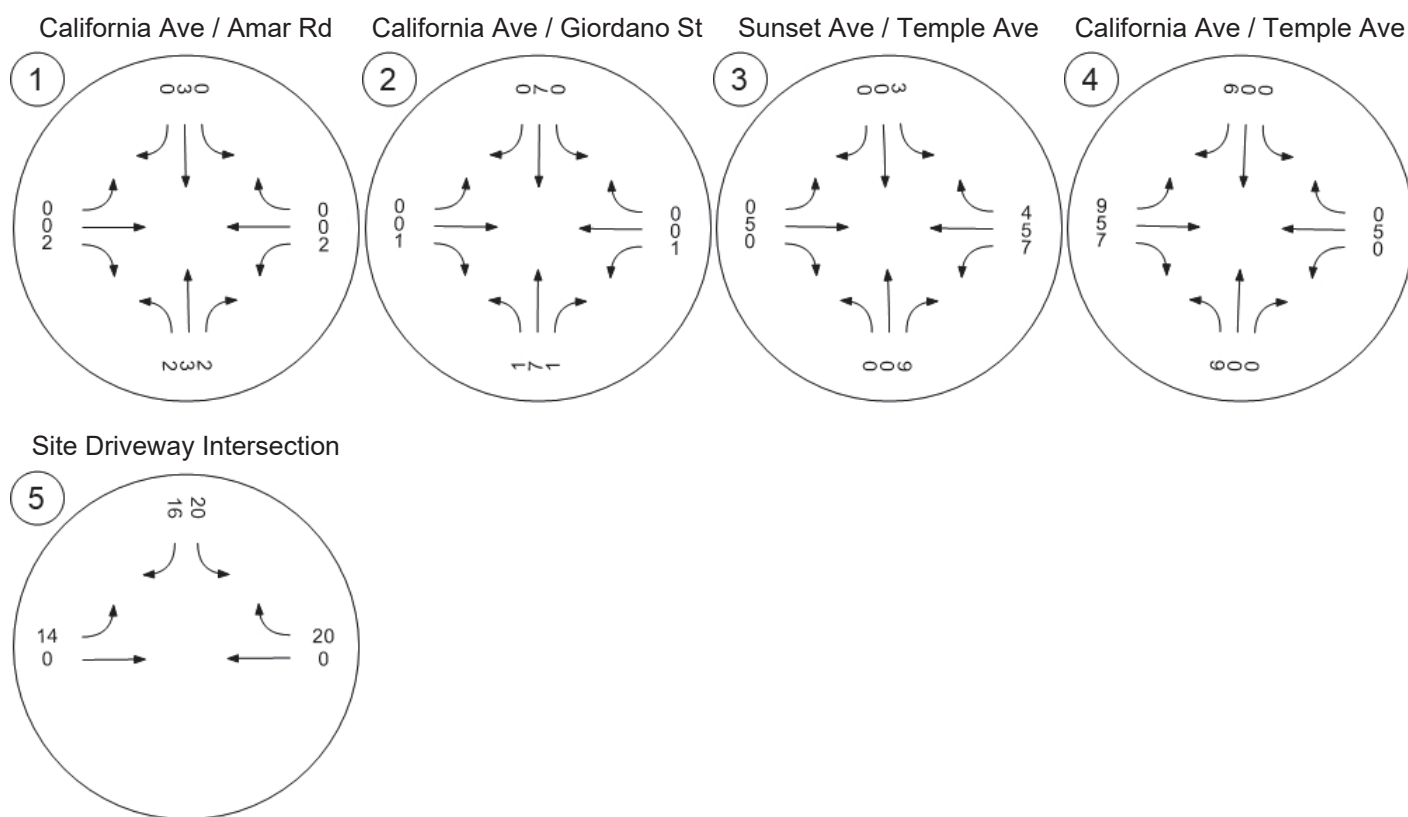
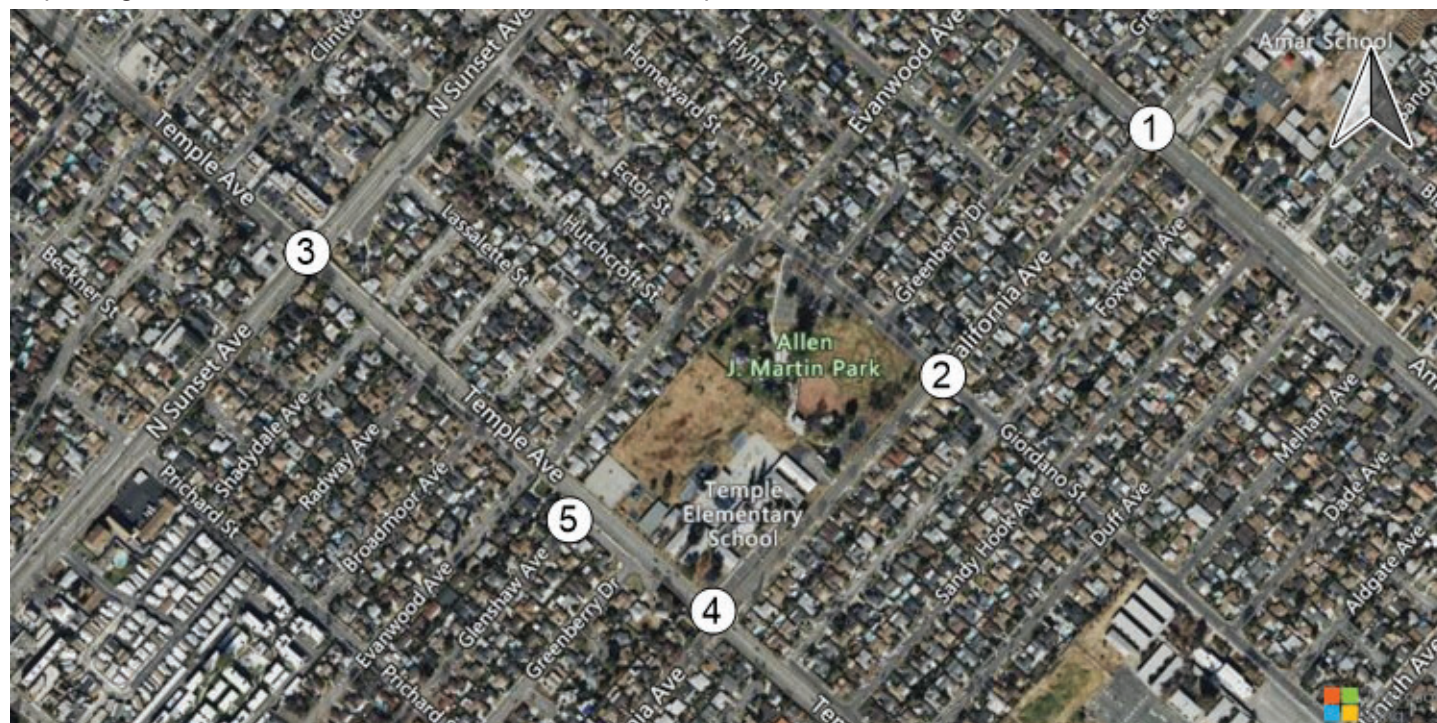
Intersection Settings

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	0.13	0.02	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	30.11	13.04	8.98	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.52	0.52	0.05	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.89	12.89	1.16	0.58	0.00	0.00
d_A, Approach Delay [s/veh]	22.52		0.11		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.50					
Intersection LOS	D					

Report Figure 7209074d: Traffic Volume - Net New Site Trips



APPENDIX E
Future Pre-Project LOS Worksheets

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 11 FutSatMD_NO_PROJ

Report File: J:\...\FutSatMD_No_PROJv2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Thru	0.668	40.2	D
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.264	8.6	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.731	59.9	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.419	32.0	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	EB Thru	0.000	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	24	128	47	82	101	47	64	1071	23	53	1152	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	1	0	1	0	1	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	132	48	84	104	49	66	1104	24	56	1188	84
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	33	12	21	26	12	17	276	6	14	297	21
Total Analysis Volume [veh/h]	26	132	48	84	104	49	66	1104	24	56	1188	84
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.14	0.26	0.16	0.34	0.02	0.12	0.37	0.06
s, saturation flow rate [veh/h]	1519	925	424	3204	1431	459	3204	1431
c, Capacity [veh/h]	230	158	271	2243	1001	297	2243	1001
d1, Uniform Delay [s]	56.64	58.22	18.64	8.92	5.95	16.57	9.30	6.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.55	253.24	2.13	0.78	0.04	1.40	0.90	0.16
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	0.90	1.50	0.24	0.49	0.02	0.19	0.53	0.08
d, Delay for Lane Group [s/veh]	94.18	311.46	20.77	9.70	5.99	17.96	10.20	6.38
Lane Group LOS	F	F	C	A	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.19	16.41	1.32	6.94	0.21	1.02	7.78	0.76
50th-Percentile Queue Length [ft/ln]	229.70	410.29	33.09	173.39	5.16	25.53	194.60	18.88
95th-Percentile Queue Length [veh/ln]	14.16	26.62	2.38	11.25	0.37	1.84	12.36	1.36
95th-Percentile Queue Length [ft/ln]	353.98	665.48	59.56	281.37	9.28	45.95	308.99	33.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	94.18	94.18	94.18	311.46	311.46	311.46	20.77	9.70	5.99	17.96	10.20	6.38
Movement LOS	F	F	F	F	F	F	C	A	A	B	B	A
d_A, Approach Delay [s/veh]	94.18			311.46			10.24			10.28		
Approach LOS	F			F			B			B		
d_I, Intersection Delay [s/veh]	40.17											
Intersection LOS	D											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	2.002	2.079	2.905	3.005
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.900	1.951	2.545	2.655
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.6
 Level Of Service: A
 Volume to Capacity (v/c): 0.264

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	20	168	21	20	118	23	24	9	21	20	9	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	2	1	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]	21	174	24	22	122	24	25	9	22	21	9	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	44	6	6	31	6	6	2	6	5	2	6
Total Analysis Volume [veh/h]	21	174	24	22	122	24	25	9	22	21	9	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	828	821	760	769
Degree of Utilization, x	0.26	0.20	0.07	0.07

Movement, Approach, & Intersection Results





95th-Percentile Queue Length [veh]	1.06	0.76	0.24	0.23
95th-Percentile Queue Length [ft]	26.58	19.12	5.94	5.77
Approach Delay [s/veh]	8.90	8.51	8.11	8.05
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.59			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	59.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	134	922	114	118	795	183	238	585	127	125	522	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	4	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	954	121	122	819	188	245	603	131	129	538	133
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	239	30	31	205	47	61	151	33	32	135	33
Total Analysis Volume [veh/h]	138	954	121	122	819	188	245	603	131	129	538	133
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	95.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.21	0.33	0.33	0.19	0.31	0.31	0.28	0.22	0.22	0.15	0.21	0.21
s, saturation flow rate [veh/h]	671	1683	1618	644	1683	1576	891	1683	1580	860	1683	1569
c, Capacity [veh/h]	221	640	615	207	640	599	386	640	600	365	640	596
d1, Uniform Delay [s]	42.52	56.98	57.04	43.64	55.61	55.65	33.55	49.60	49.60	31.23	48.42	48.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.64	13.81	14.45	11.79	10.81	11.55	7.74	4.00	4.25	2.67	3.28	3.53
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	0.62	0.86	0.86	0.59	0.81	0.81	0.63	0.59	0.59	0.35	0.54	0.54
d, Delay for Lane Group [s/veh]	55.16	70.78	71.49	55.42	66.43	67.21	41.29	53.59	53.85	33.90	51.70	51.98
Lane Group LOS	E	E	E	E	E	E	D	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.87	28.07	27.17	4.26	25.65	24.19	8.03	16.12	15.18	3.76	14.37	13.48
50th-Percentile Queue Length [ft/ln]	121.74	701.63	679.24	106.44	641.20	604.73	200.72	403.11	379.56	94.08	359.31	336.95
95th-Percentile Queue Length [veh/ln]	8.49	36.75	35.72	7.64	33.95	32.25	12.68	22.71	21.57	6.77	20.59	19.50
95th-Percentile Queue Length [ft/ln]	212.22	918.83	892.95	191.03	848.84	806.37	316.90	567.75	539.31	169.34	514.74	487.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.16	71.08	71.49	55.42	66.71	67.21	41.29	53.69	53.85	33.90	51.80	51.98
Movement LOS	E	E	E	E	E	E	D	D	D	C	D	D
d_A, Approach Delay [s/veh]	69.31			65.57			50.60			48.94		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	59.89											
Intersection LOS	E											
Intersection V/C	0.731											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.855	2.952	2.773	2.725
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.560	2.491	2.367	2.220
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	44	108	33	40	92	38	50	748	36	27	684	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	2	1	0	0	0	1
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]	45	111	34	41	95	39	54	771	37	28	705	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	28	9	10	24	10	14	193	9	7	176	9
Total Analysis Volume [veh/h]	45	111	34	41	95	39	54	771	37	28	705	36
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.06	0.24	0.24	0.03	0.22	0.22
s, saturation flow rate [veh/h]	1475	1454	941	1683	1656	913	1683	1654
c, Capacity [veh/h]	458	452	575	720	709	553	720	708
d1, Uniform Delay [s]	38.10	37.71	10.77	28.48	28.49	11.01	27.75	27.76
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	2.49	0.32	3.20	3.25	0.17	2.66	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	0.41	0.39	0.09	0.57	0.57	0.05	0.52	0.52
d, Delay for Lane Group [s/veh]	40.85	40.20	11.09	31.68	31.74	11.18	30.41	30.47
Lane Group LOS	D	D	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.40	4.91	0.63	10.36	10.20	0.32	9.22	9.08
50th-Percentile Queue Length [ft/ln]	134.94	122.82	15.70	258.92	255.09	8.01	230.40	226.93
95th-Percentile Queue Length [veh/ln]	9.21	8.55	1.13	15.63	15.44	0.58	14.19	14.02
95th-Percentile Queue Length [ft/ln]	230.19	213.70	28.26	390.87	386.06	14.42	354.86	350.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.85	40.85	40.85	40.20	40.20	40.20	11.09	31.71	31.74	11.18	30.44	30.47
Movement LOS	D	D	D	D	D	D	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	40.85			40.20			30.42			29.74		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.01											
Intersection LOS	C											
Intersection V/C	0.419											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.919	1.948	2.701	2.688
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	1.873	1.848	2.271	2.194
Bicycle LOS	A	A	B	B

Sequence

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



Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	3	0	0
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]	0	0	0	1	0	0
Total Analysis Volume [veh/h]	0	0	0	3	0	0
Pedestrian Volume [ped/h]	0		0		0	

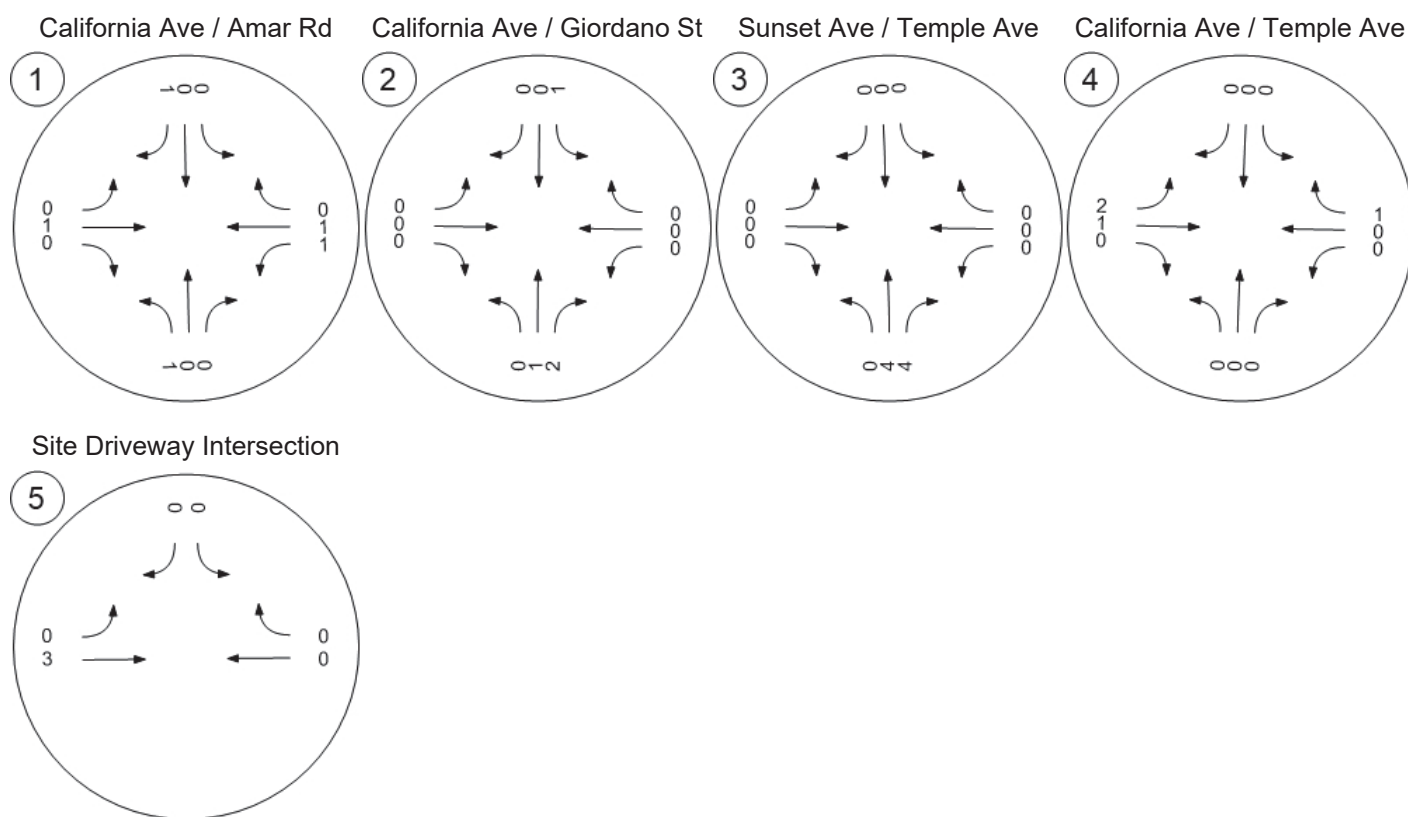
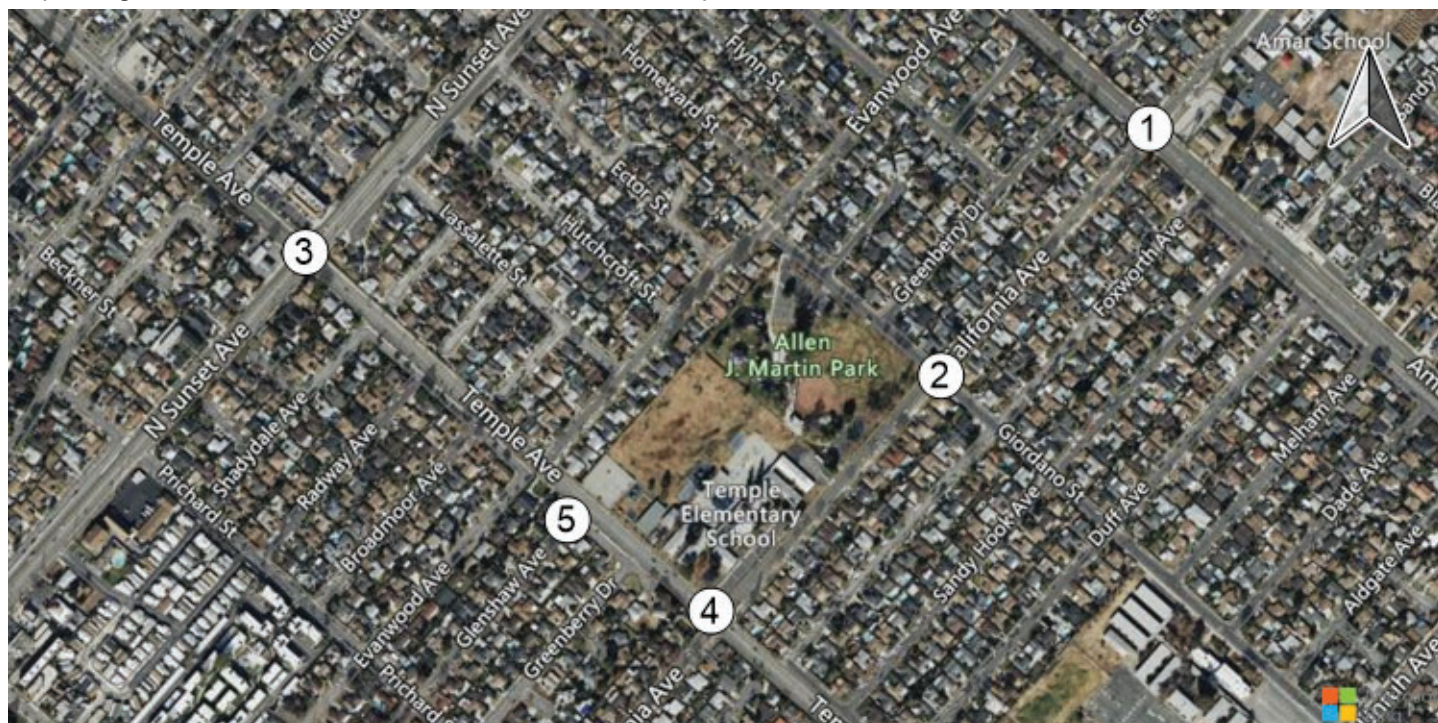
Intersection Settings

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	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.53	8.32	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.42		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Report Figure 7209074d: Traffic Volume - Net New Site Trips



SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 6 Fut_NO_PROJ_AM

Report File: J:\...\Fut_No_Proj_AMv2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Left	0.659	28.2	C
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.141	7.9	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	SB Right	0.845	70.5	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	SB Thru	0.455	34.0	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	WB Thru	0.011	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.659

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	28	88	20	82	79	48	42	605	8	17	1321	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	0	0	0	1	1	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
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	91	22	84	81	49	44	624	9	18	1362	46
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	23	6	21	20	12	11	156	2	5	341	12
Total Analysis Volume [veh/h]	29	91	22	84	81	49	44	624	9	18	1362	46
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.10	0.19	0.12	0.19	0.01	0.02	0.43	0.03
s, saturation flow rate [veh/h]	1458	1107	359	3204	1431	721	3204	1431
c, Capacity [veh/h]	224	183	222	2243	1001	496	2243	1001
d1, Uniform Delay [s]	54.04	58.42	21.37	7.26	5.89	10.03	10.17	6.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.90	118.86	2.00	0.31	0.02	0.14	1.23	0.09
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	0.63	1.17	0.20	0.28	0.01	0.04	0.61	0.05
d, Delay for Lane Group [s/veh]	66.95	177.28	23.37	7.57	5.90	10.17	11.41	6.13
Lane Group LOS	E	F	C	A	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.27	12.14	0.95	3.18	0.08	0.22	9.80	0.40
50th-Percentile Queue Length [ft/ln]	131.83	303.52	23.78	79.40	1.91	5.60	244.98	10.05
95th-Percentile Queue Length [veh/ln]	9.04	19.05	1.71	5.72	0.14	0.40	14.93	0.72
95th-Percentile Queue Length [ft/ln]	225.98	476.23	42.80	142.93	3.44	10.09	373.32	18.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.95	66.95	66.95	177.28	177.28	177.28	23.37	7.57	5.90	10.17	11.41	6.13
Movement LOS	E	E	E	F	F	F	C	A	A	B	B	A
d_A, Approach Delay [s/veh]	66.95			177.28			8.58			11.22		
Approach LOS	E			F			A			B		
d_I, Intersection Delay [s/veh]	28.16											
Intersection LOS	C											
Intersection V/C	0.659											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.879	1.987	2.854	2.939
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.794	1.913	2.118	2.736
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 7.9
 Level Of Service: A
 Volume to Capacity (v/c): 0.141

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	10	94	2	4	96	15	30	9	26	6	21	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	1	0	0	0	0	2	0	1
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]	10	97	2	4	100	15	31	9	27	8	22	23
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	24	1	1	25	4	8	2	7	2	6	6
Total Analysis Volume [veh/h]	10	97	2	4	100	15	31	9	27	8	22	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	829	846	826	838
Degree of Utilization, x	0.13	0.14	0.08	0.06

Movement, Approach, & Intersection Results





95th-Percentile Queue Length [veh]	0.45	0.49	0.26	0.20
95th-Percentile Queue Length [ft]	11.30	12.22	6.60	5.05
Approach Delay [s/veh]	8.00	7.95	7.74	7.58
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.87			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type: Signalized
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 70.5
 Level Of Service: E
 Volume to Capacity (v/c): 0.845

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	120	591	57	93	1106	143	136	426	159	133	829	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	4	0	0	0	0	4	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]	124	609	59	96	1143	147	140	439	164	141	854	88
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	152	15	24	286	37	35	110	41	35	214	22
Total Analysis Volume [veh/h]	124	609	59	96	1143	147	140	439	164	141	854	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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.22	0.20	0.20	0.12	0.39	0.39	0.18	0.19	0.19	0.15	0.28	0.28
s, saturation flow rate [veh/h]	570	1683	1631	830	1683	1617	770	1683	1529	926	1683	1628
c, Capacity [veh/h]	168	640	620	326	640	614	305	640	581	409	640	619
d1, Uniform Delay [s]	54.86	48.14	48.15	33.87	62.00	62.00	35.62	47.30	47.35	29.97	53.72	53.73
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.88	3.13	3.23	2.29	42.14	44.92	4.90	2.70	3.00	2.29	7.83	8.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.74	0.53	0.53	0.29	1.03	1.03	0.46	0.49	0.50	0.34	0.75	0.75
d, Delay for Lane Group [s/veh]	79.74	51.27	51.38	36.16	104.14	106.92	40.53	50.00	50.35	32.26	61.55	61.82
Lane Group LOS	E	D	D	D	F	F	D	D	D	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.81	13.95	13.56	2.98	40.04	38.94	4.23	12.72	11.67	4.11	22.50	21.83
50th-Percentile Queue Length [ft/ln]	120.15	348.87	339.05	74.41	1001.0	973.55	105.85	317.96	291.87	102.73	562.56	545.73
95th-Percentile Queue Length [veh/ln]	8.40	20.08	19.60	5.36	51.38	50.38	7.61	18.57	17.28	7.40	30.28	29.49
95th-Percentile Queue Length [ft/ln]	210.03	502.03	490.04	133.94	1284.5	1259.4	190.22	464.18	431.96	184.92	757.06	737.28

Movement, Approach, & Intersection Results

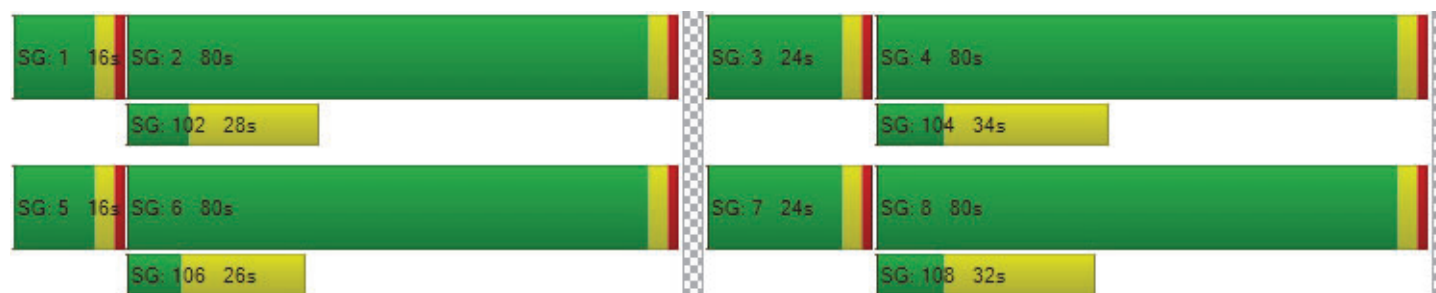
d_M, Delay for Movement [s/veh]	79.74	51.32	51.38	36.16	105.33	106.92	40.53	50.10	50.35	32.26	61.67	61.82
Movement LOS	E	D	D	D	F	F	D	D	D	C	E	E
d_A, Approach Delay [s/veh]	55.77			100.70			48.35			57.85		
Approach LOS	E			F			D			E		
d_I, Intersection Delay [s/veh]	70.51											
Intersection LOS	E											
Intersection V/C	0.845											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.851	2.847	2.770	2.717
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.213	2.703	2.173	2.453
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	34.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	22	71	12	34	62	39	26	554	26	15	991	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	1	0	2	0	0	0	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	73	12	36	64	42	27	571	27	15	1022	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	18	3	9	16	11	7	143	7	4	256	4
Total Analysis Volume [veh/h]	23	73	12	36	64	42	27	571	27	15	1022	15
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.03	0.18	0.18	0.01	0.31	0.31
s, saturation flow rate [veh/h]	1551	1489	832	1683	1656	1004	1683	1674
c, Capacity [veh/h]	480	463	486	720	709	629	720	717
d1, Uniform Delay [s]	35.81	36.71	13.26	26.30	26.31	9.68	31.24	31.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.09	1.71	0.22	1.78	1.82	0.07	6.17	6.20
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	0.23	0.31	0.06	0.42	0.42	0.02	0.72	0.72
d, Delay for Lane Group [s/veh]	36.90	38.43	13.47	28.08	28.12	9.75	37.41	37.44
Lane Group LOS	D	D	B	C	C	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.83	3.84	0.31	6.99	6.90	0.17	14.84	14.77
50th-Percentile Queue Length [ft/ln]	70.72	95.90	7.81	174.73	172.54	4.21	370.99	369.27
95th-Percentile Queue Length [veh/ln]	5.09	6.90	0.56	11.32	11.21	0.30	21.16	21.07
95th-Percentile Queue Length [ft/ln]	127.30	172.62	14.06	283.12	280.25	7.57	528.93	526.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.90	36.90	36.90	38.43	38.43	38.43	13.47	28.10	28.12	9.75	37.43	37.44
Movement LOS	D	D	D	D	D	D	B	C	C	A	D	D
d_A, Approach Delay [s/veh]	36.90			38.43			27.47			37.03		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	34.03											
Intersection LOS	C											
Intersection V/C	0.455											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.844	1.873	2.681	2.692
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	1.738	1.794	2.075	2.428
Bicycle LOS	A	A	B	B

Sequence

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





Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	576	1052	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	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]	0	0	0	593	1087	0
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]	0	0	0	148	272	0
Total Analysis Volume [veh/h]	0	0	0	593	1087	0
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	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	31.73	12.45	10.65	0.00	0.00	0.00
Movement LOS	D	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.09		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 7 Fut_NO_PROJ_PM

Report File: J:\...\Fut_No_Proj_PMV2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	NB Thru	0.690	57.3	E
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	SB Thru	0.447	10.0	B
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.921	99.7	F
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.590	37.1	D
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	EB Thru	0.012	0.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	57.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	42	200	59	66	105	69	52	1298	36	27	978	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	1	0	1	0	1	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	206	61	68	108	72	54	1338	37	29	1008	89
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	52	15	17	27	18	14	335	9	7	252	22
Total Analysis Volume [veh/h]	44	206	61	68	108	72	54	1338	37	29	1008	89
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.22	0.23	0.11	0.42	0.03	0.08	0.31	0.06
s, saturation flow rate [veh/h]	1428	1080	503	3204	1431	368	3204	1431
c, Capacity [veh/h]	218	177	331	2243	1001	228	2243	1001
d1, Uniform Delay [s]	57.53	57.86	14.95	10.04	6.01	19.86	8.53	6.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	215.64	212.53	1.06	1.18	0.07	1.15	0.65	0.18
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	1.42	1.40	0.16	0.60	0.04	0.13	0.45	0.09
d, Delay for Lane Group [s/veh]	273.17	270.39	16.01	11.22	6.07	21.00	9.19	6.41
Lane Group LOS	F	F	B	B	A	C	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	20.33	16.29	0.91	9.50	0.32	0.58	6.05	0.80
50th-Percentile Queue Length [ft/ln]	508.21	407.17	22.81	237.44	8.03	14.62	151.21	20.08
95th-Percentile Queue Length [veh/ln]	31.74	26.03	1.64	14.55	0.58	1.05	10.08	1.45
95th-Percentile Queue Length [ft/ln]	793.50	650.66	41.07	363.79	14.45	26.32	252.05	36.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	273.17	273.17	273.17	270.39	270.39	270.39	16.01	11.22	6.07	21.00	9.19	6.41
Movement LOS	F	F	F	F	F	F	B	B	A	C	A	A
d_A, Approach Delay [s/veh]	273.17			270.39			11.27			9.27		
Approach LOS	F			F			B			A		
d_I, Intersection Delay [s/veh]	57.34											
Intersection LOS	E											
Intersection V/C	0.690											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	2.009	2.100	2.947	2.987
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	2.073	1.969	2.739	2.489
Bicycle LOS	B	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 10.0
 Level Of Service: B
 Volume to Capacity (v/c): 0.447

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	27	155	14	11	329	15	14	18	19	7	19	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	2	1	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]	28	161	16	12	339	15	14	19	20	7	20	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	40	4	3	85	4	4	5	5	2	5	3
Total Analysis Volume [veh/h]	28	161	16	12	339	15	14	19	20	7	20	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	790	819	704	698
Degree of Utilization, x	0.26	0.45	0.08	0.06





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.04	2.33	0.24	0.18
95th-Percentile Queue Length [ft]	25.92	58.16	6.09	4.43
Approach Delay [s/veh]	9.15	10.89	8.53	8.47
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	10.02			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	99.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.921

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	211	1267	211	104	794	160	207	825	133	83	466	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	4	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]	217	1309	221	107	818	165	213	850	137	85	480	110
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	327	55	27	205	41	53	213	34	21	120	28
Total Analysis Volume [veh/h]	217	1309	221	107	818	165	213	850	137	85	480	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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.32	0.46	0.47	0.21	0.30	0.30	0.23	0.30	0.30	0.11	0.18	0.18
s, saturation flow rate [veh/h]	681	1683	1601	503	1683	1586	933	1683	1603	753	1683	1576
c, Capacity [veh/h]	228	640	608	167	640	603	416	640	609	292	640	599
d1, Uniform Delay [s]	57.34	62.00	62.00	49.32	54.96	54.98	31.48	54.92	54.98	34.93	46.91	46.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	48.59	107.54	124.06	17.26	9.66	10.23	4.45	9.59	10.13	2.52	2.52	2.72
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	0.95	1.21	1.25	0.64	0.79	0.79	0.51	0.79	0.79	0.29	0.48	0.48
d, Delay for Lane Group [s/veh]	105.94	169.54	186.06	66.58	64.62	65.21	35.93	64.50	65.11	37.45	49.43	49.69
Lane Group LOS	F	F	F	E	E	E	D	E	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.88	51.66	51.92	3.91	24.54	23.25	6.63	24.47	23.47	2.44	12.15	11.49
50th-Percentile Queue Length [ft/ln]	246.98	1291.4	1298.0	97.77	613.52	581.27	165.73	611.73	586.84	60.96	303.69	287.23
95th-Percentile Queue Length [veh/ln]	15.03	72.06	73.64	7.04	32.67	31.16	10.85	32.58	31.42	4.39	17.86	17.05
95th-Percentile Queue Length [ft/ln]	375.84	1801.4	1841.1	175.99	816.63	778.97	271.29	814.54	785.48	109.73	446.58	426.21

Movement, Approach, & Intersection Results

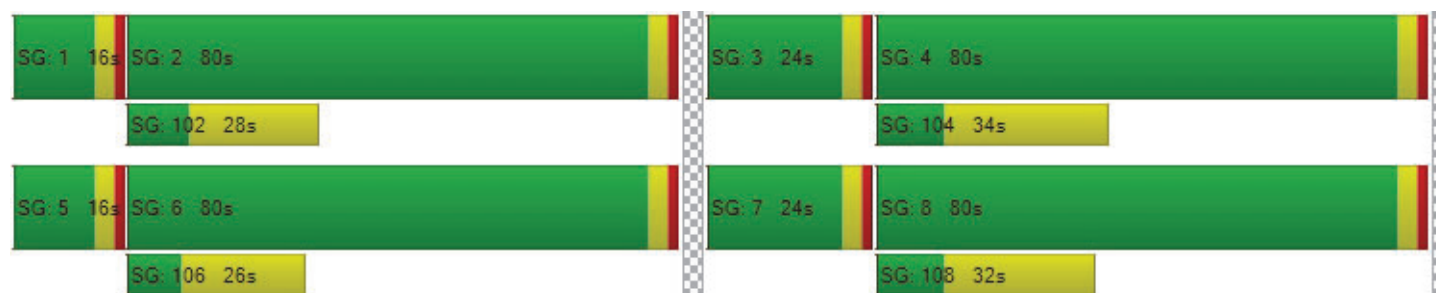
d_M, Delay for Movement [s/veh]	105.94	176.32	186.06	66.58	64.84	65.21	35.93	64.75	65.11	37.45	49.52	49.69
Movement LOS	F	F	F	E	E	E	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	168.81			65.07			59.68			48.03		
Approach LOS	F			E			E			D		
d_I, Intersection Delay [s/veh]	99.72											
Intersection LOS	F											
Intersection V/C	0.921											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.927	2.985	2.865	2.757
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	3.001	2.459	2.550	2.116
Bicycle LOS	C	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	35	197	55	29	112	25	53	1062	30	34	587	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
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	2	1	0	0	0	1
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]	36	203	57	30	115	26	57	1095	31	35	605	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	51	14	8	29	7	14	274	8	9	151	9
Total Analysis Volume [veh/h]	36	203	57	30	115	26	57	1095	31	35	605	36
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.19	0.12	0.06	0.34	0.34	0.04	0.19	0.19
s, saturation flow rate [veh/h]	1572	1410	984	1683	1667	805	1683	1650
c, Capacity [veh/h]	483	438	612	720	713	464	720	706
d1, Uniform Delay [s]	40.95	37.41	10.20	32.52	32.53	14.74	26.73	26.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.70	2.61	0.30	8.40	8.49	0.32	2.02	2.07
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	0.61	0.39	0.09	0.79	0.79	0.08	0.45	0.45
d, Delay for Lane Group [s/veh]	46.65	40.02	10.50	40.92	41.02	15.06	28.75	28.80
Lane Group LOS	D	D	B	D	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.19	4.76	0.66	17.09	16.95	0.41	7.64	7.52
50th-Percentile Queue Length [ft/ln]	229.79	119.08	16.52	427.27	423.85	10.24	191.11	188.00
95th-Percentile Queue Length [veh/ln]	14.16	8.34	1.19	23.87	23.71	0.74	12.18	12.02
95th-Percentile Queue Length [ft/ln]	354.09	208.57	29.73	596.77	592.67	18.44	304.47	300.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.65	46.65	46.65	40.02	40.02	40.02	10.50	40.97	41.02	15.06	28.77	28.80
Movement LOS	D	D	D	D	D	D	B	D	D	B	C	C
d_A, Approach Delay [s/veh]	46.65			40.02			39.50			28.07		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	37.13											
Intersection LOS	D											
Intersection V/C	0.590											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.985	1.994	2.727	2.720
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	2.048	1.842	2.536	2.117
Bicycle LOS	B	A	B	B

Sequence

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





Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	1140	647	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1177	666	0
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]	0	0	0	294	167	0
Total Analysis Volume [veh/h]	0	0	0	1177	666	0
Pedestrian Volume [ped/h]	0		0		0	

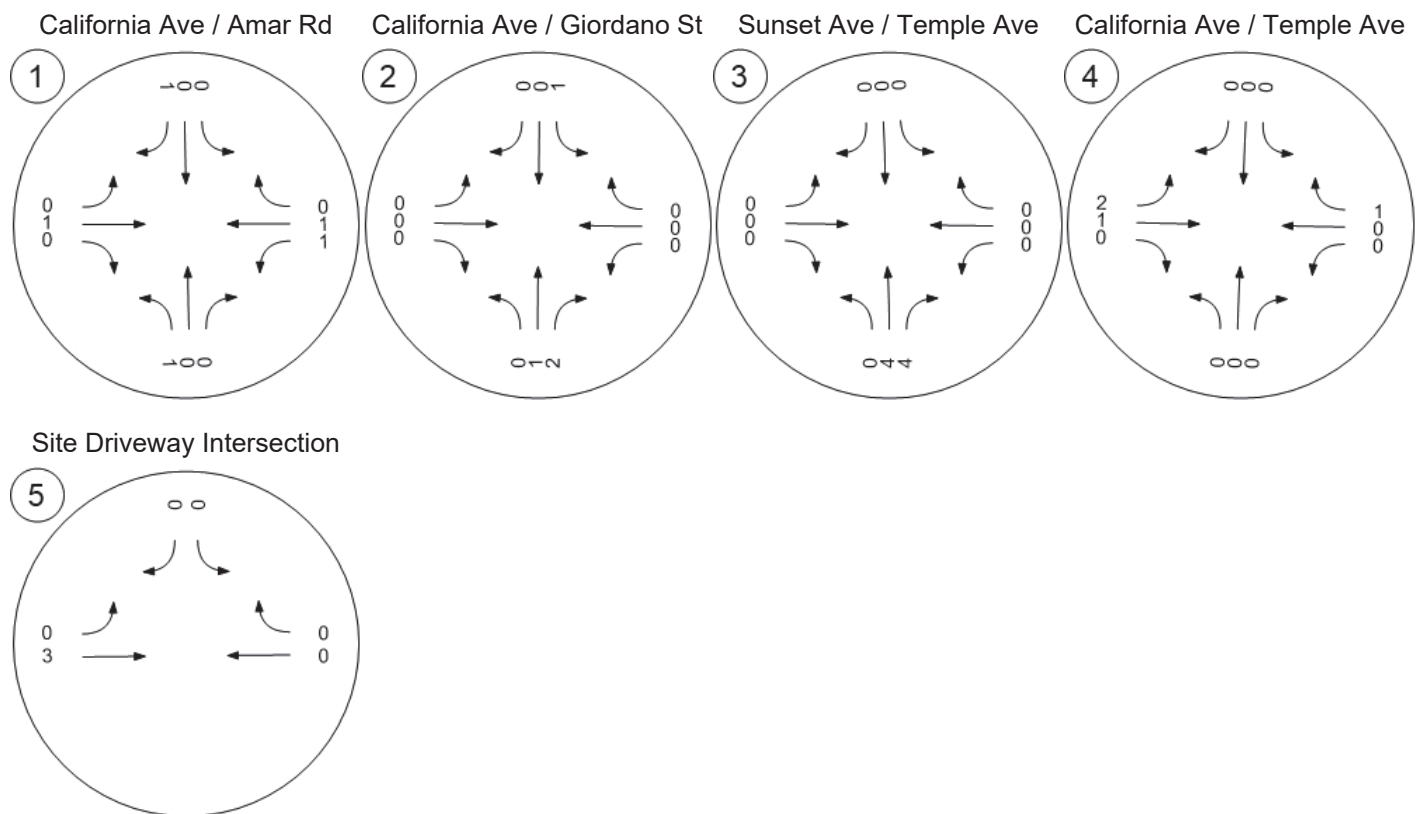
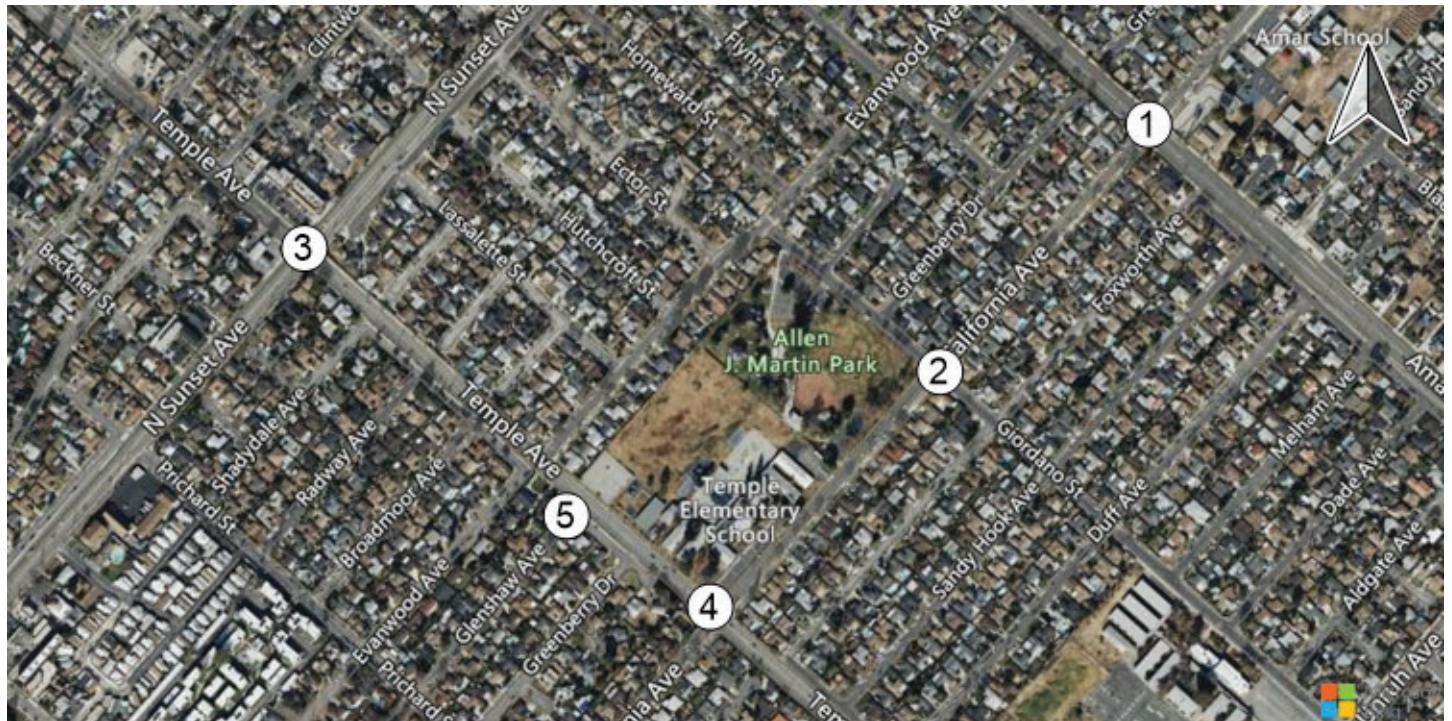
Intersection Settings

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	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	26.99	10.43	8.92	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.71		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Report Figure 7209074d: Traffic Volume - Net New Site Trips



APPENDIX F
Future Post-Project LOS Worksheets

SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 12 FutSatMD_W_PROJ

Report File: J:\...\FutSatMD_W_PROJv2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Thru	0.669	40.8	D
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.270	8.6	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.734	60.0	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.425	32.1	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	SB Left	0.008	8.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	40.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	24	128	47	82	101	47	64	1071	23	53	1152	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	1	0	2	1	0	1	1	2	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	133	49	84	106	49	66	1104	25	57	1188	84
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	33	12	21	27	12	17	276	6	14	297	21
Total Analysis Volume [veh/h]	27	133	49	84	106	49	66	1104	25	57	1188	84
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.14	0.26	0.16	0.34	0.02	0.12	0.37	0.06
s, saturation flow rate [veh/h]	1512	931	424	3204	1431	459	3204	1431
c, Capacity [veh/h]	229	159	271	2243	1001	297	2243	1001
d1, Uniform Delay [s]	56.79	58.21	18.64	8.92	5.95	16.61	9.30	6.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	40.45	255.54	2.13	0.78	0.05	1.43	0.90	0.16
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	0.91	1.50	0.24	0.49	0.02	0.19	0.53	0.08
d, Delay for Lane Group [s/veh]	97.24	313.75	20.77	9.70	6.00	18.04	10.20	6.38
Lane Group LOS	F	F	C	A	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	9.49	16.59	1.32	6.94	0.22	1.04	7.78	0.76
50th-Percentile Queue Length [ft/ln]	237.13	414.71	33.09	173.39	5.38	26.05	194.60	18.88
95th-Percentile Queue Length [veh/ln]	14.54	26.89	2.38	11.25	0.39	1.88	12.36	1.36
95th-Percentile Queue Length [ft/ln]	363.40	672.36	59.56	281.37	9.68	46.89	308.99	33.98

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	97.24	97.24	97.24	313.75	313.75	313.75	20.77	9.70	6.00	18.04	10.20	6.38
Movement LOS	F	F	F	F	F	F	C	A	A	B	B	A
d_A, Approach Delay [s/veh]	97.24			313.75			10.23			10.29		
Approach LOS	F			F			B			B		
d_I, Intersection Delay [s/veh]	40.79											
Intersection LOS	D											
Intersection V/C	0.669											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	2.006	2.080	2.907	3.006
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.904	1.954	2.545	2.656
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type:	All-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.270

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	20	168	21	20	118	23	24	9	21	20	9	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	2	1	4	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]	21	178	24	22	126	24	25	9	22	21	9	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	45	6	6	32	6	6	2	6	5	2	6
Total Analysis Volume [veh/h]	21	178	24	22	126	24	25	9	22	21	9	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	827	820	758	765
Degree of Utilization, x	0.27	0.21	0.07	0.07





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.09	0.79	0.24	0.23
95th-Percentile Queue Length [ft]	27.29	19.73	5.97	5.79
Approach Delay [s/veh]	8.95	8.56	8.13	8.07
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.63			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	60.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	134	922	114	118	795	183	238	585	127	125	522	129
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	7	2	0	0	0	3	0	3	2	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	954	124	124	819	188	245	606	131	132	540	135
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	239	31	31	205	47	61	152	33	33	135	34
Total Analysis Volume [veh/h]	138	954	124	124	819	188	245	606	131	132	540	135
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	95.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.21	0.33	0.33	0.19	0.31	0.31	0.28	0.23	0.23	0.15	0.21	0.21
s, saturation flow rate [veh/h]	671	1683	1616	643	1683	1576	889	1683	1581	859	1683	1568
c, Capacity [veh/h]	221	640	614	206	640	599	385	640	601	364	640	596
d1, Uniform Delay [s]	42.52	57.06	57.13	43.84	55.61	55.65	33.62	49.65	49.65	31.35	48.50	48.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.64	14.03	14.70	12.38	10.81	11.55	7.84	4.03	4.29	2.79	3.33	3.58
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	0.62	0.86	0.86	0.60	0.81	0.81	0.64	0.59	0.59	0.36	0.55	0.55
d, Delay for Lane Group [s/veh]	55.16	71.09	71.83	56.22	66.42	67.21	41.46	53.69	53.94	34.14	51.83	52.11
Lane Group LOS	E	E	E	E	E	E	D	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.87	28.22	27.31	4.35	25.65	24.19	8.04	16.21	15.27	3.86	14.49	13.58
50th-Percentile Queue Length [ft/ln]	121.74	705.62	682.73	108.81	641.18	604.75	200.92	405.25	381.67	96.56	362.27	339.46
95th-Percentile Queue Length [veh/ln]	8.49	36.94	35.88	7.77	33.95	32.26	12.69	22.81	21.67	6.95	20.73	19.62
95th-Percentile Queue Length [ft/ln]	212.22	923.44	896.98	194.34	848.82	806.40	317.15	570.32	541.87	173.82	518.34	490.54

Movement, Approach, & Intersection Results

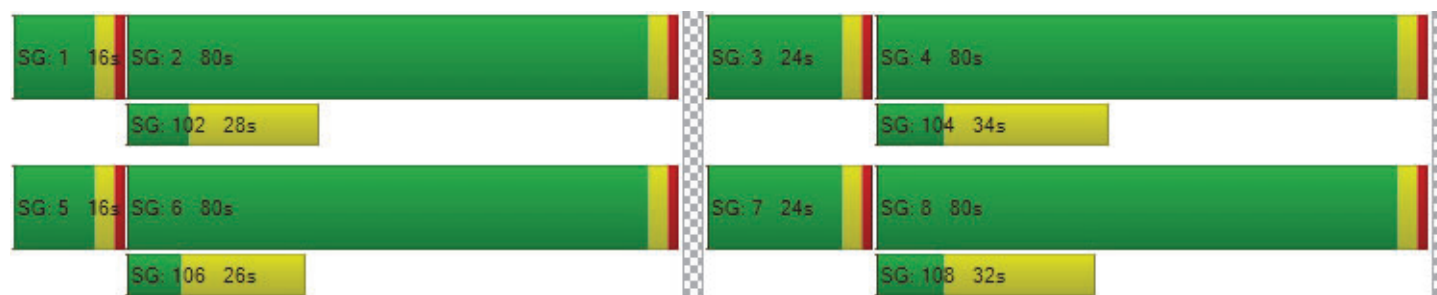
d_M, Delay for Movement [s/veh]	55.16	71.40	71.83	56.22	66.71	67.21	41.46	53.78	53.94	34.14	51.93	52.11
Movement LOS	E	E	E	E	E	E	D	D	D	C	D	D
d_A, Approach Delay [s/veh]	69.60			65.64			50.73			49.05		
Approach LOS	E			E			D			D		
d_I, Intersection Delay [s/veh]	60.03											
Intersection LOS	E											
Intersection V/C	0.734											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.857	2.953	2.774	2.729
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.563	2.493	2.370	2.225
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.425

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	44	108	33	40	92	38	50	748	36	27	684	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	0	0	0	0	4	6	3	3	0	3	1
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]	48	111	34	41	95	43	58	773	40	28	708	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	28	9	10	24	11	15	193	10	7	177	9
Total Analysis Volume [veh/h]	48	111	34	41	95	43	58	773	40	28	708	36
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	7.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.12	0.06	0.24	0.24	0.03	0.22	0.22
s, saturation flow rate [veh/h]	1455	1450	939	1683	1654	911	1683	1654
c, Capacity [veh/h]	453	451	574	720	708	551	720	708
d1, Uniform Delay [s]	38.29	37.83	10.82	28.55	28.55	11.05	27.78	27.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.92	2.60	0.35	3.25	3.30	0.17	2.68	2.73
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	0.43	0.40	0.10	0.57	0.57	0.05	0.52	0.52
d, Delay for Lane Group [s/veh]	41.21	40.44	11.17	31.79	31.85	11.22	30.46	30.52
Lane Group LOS	D	D	B	C	C	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.53	5.05	0.68	10.45	10.29	0.32	9.27	9.13
50th-Percentile Queue Length [ft/ln]	138.16	126.20	16.91	261.35	257.19	8.01	231.63	228.16
95th-Percentile Queue Length [veh/ln]	9.38	8.73	1.22	15.76	15.55	0.58	14.26	14.08
95th-Percentile Queue Length [ft/ln]	234.54	218.32	30.45	393.91	388.70	14.43	356.43	352.01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.21	41.21	41.21	40.44	40.44	40.44	11.17	31.82	31.85	11.22	30.49	30.52
Movement LOS	D	D	D	D	D	D	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	41.21			40.44			30.45			29.79		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.11											
Intersection LOS	C											
Intersection V/C	0.425											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0			15.0			16.0			16.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.85			51.85			50.97			50.97		
I_p,int, Pedestrian LOS Score for Intersection	1.922			1.954			2.709			2.689		
Crosswalk LOS	A			A			B			B		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	576			576			856			856		
d_b, Bicycle Delay [s]	33.47			33.47			21.59			21.59		
I_b,int, Bicycle LOS Score for Intersection	1.878			1.855			2.278			2.197		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 8.7
 Level Of Service: A
 Volume to Capacity (v/c): 0.008

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	6	8	3	0	10
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	6	8	3	0	10
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]	2	2	2	1	0	3
Total Analysis Volume [veh/h]	8	6	8	3	0	10
Pedestrian Volume [ped/h]	0		0		0	

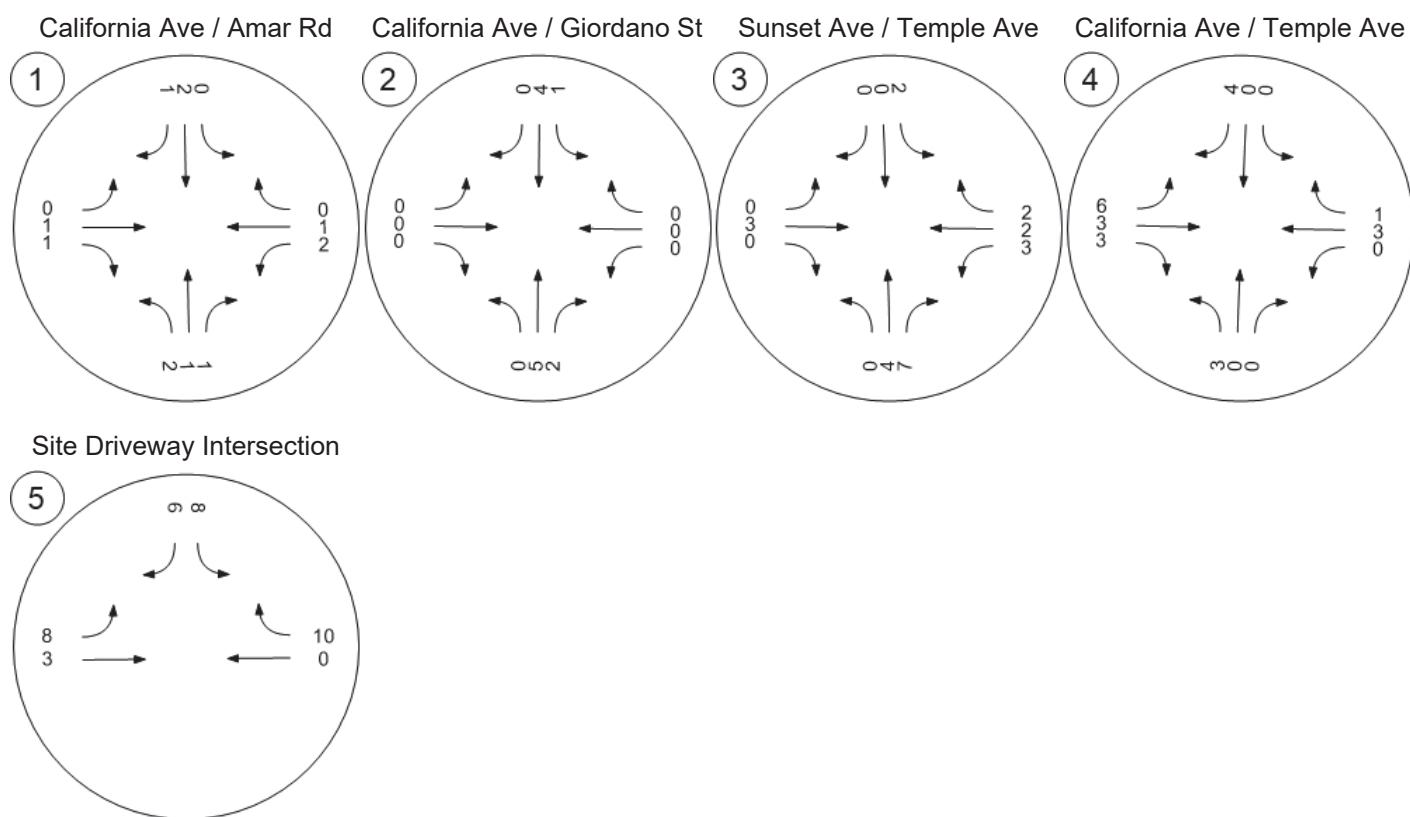
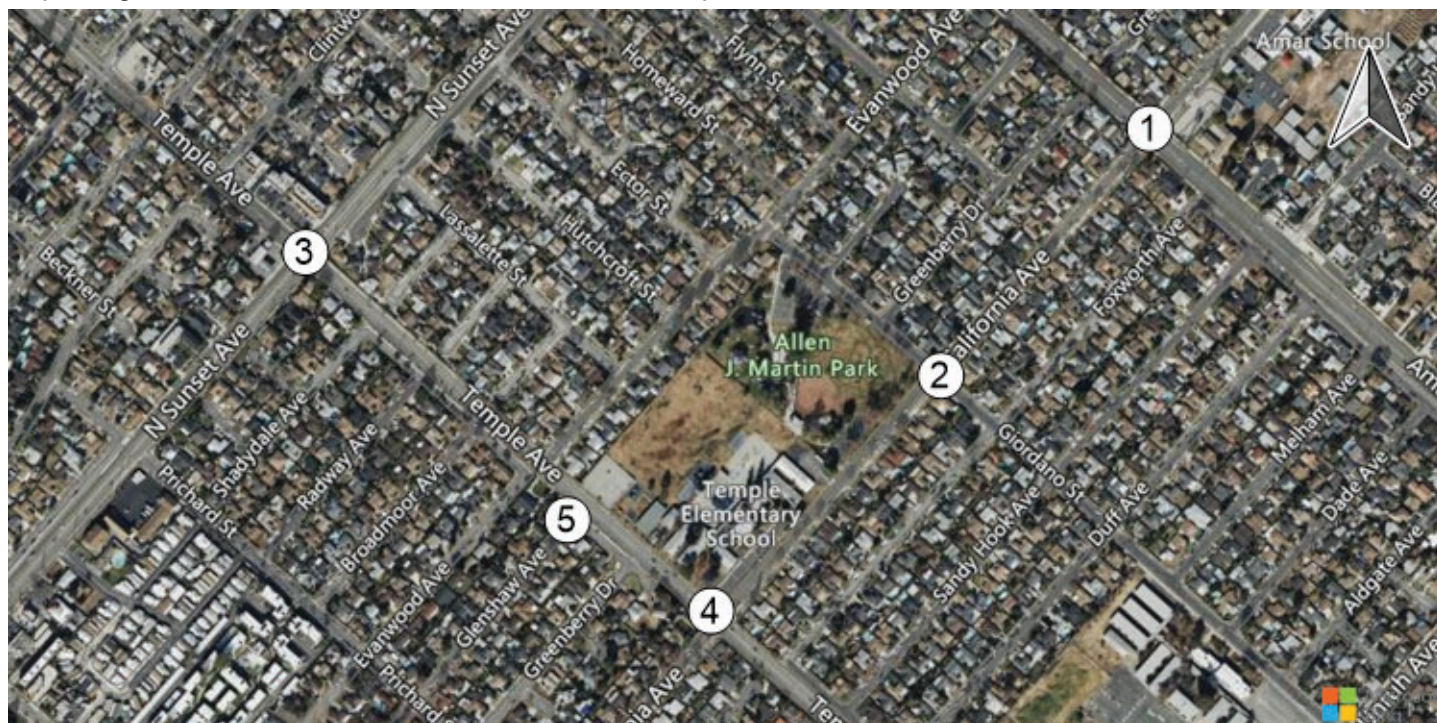
Intersection Settings

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	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.70	8.39	7.25	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.04	1.04	0.37	0.19	0.00	0.00
d_A, Approach Delay [s/veh]	8.57		5.27		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.08					
Intersection LOS	A					

Report Figure 7209074d: Traffic Volume - Net New Site Trips



SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 8 Fut_W_PROJ_AM

Report File: J:\...\Fut_W_Proj_AMv2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	SB Thru	0.665	29.5	C
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	NB Thru	0.151	7.9	A
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	SB Right	0.847	70.5	E
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	SB Thru	0.465	34.2	C
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	SB Left	0.073	36.1	E

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	28	88	20	82	79	48	42	605	8	17	1321	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	1	2	0	4	0	1	1	3	2	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	92	23	84	85	49	44	624	11	20	1362	46
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	23	6	21	21	12	11	156	3	5	341	12
Total Analysis Volume [veh/h]	30	92	23	84	85	49	44	624	11	20	1362	46
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.10	0.20	0.12	0.19	0.01	0.03	0.43	0.03
s, saturation flow rate [veh/h]	1449	1097	359	3204	1431	721	3204	1431
c, Capacity [veh/h]	223	182	222	2243	1001	496	2243	1001
d1, Uniform Delay [s]	54.20	58.39	21.37	7.26	5.90	10.06	10.17	6.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.82	130.60	2.00	0.31	0.02	0.15	1.23	0.09
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	0.65	1.20	0.20	0.28	0.01	0.04	0.61	0.05
d, Delay for Lane Group [s/veh]	68.02	188.99	23.37	7.57	5.92	10.21	11.41	6.13
Lane Group LOS	E	F	C	A	A	B	B	A
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.43	12.63	0.95	3.18	0.09	0.25	9.80	0.40
50th-Percentile Queue Length [ft/ln]	135.87	315.85	23.78	79.40	2.34	6.25	244.98	10.05
95th-Percentile Queue Length [veh/ln]	9.26	19.90	1.71	5.72	0.17	0.45	14.93	0.72
95th-Percentile Queue Length [ft/ln]	231.45	497.44	42.80	142.93	4.22	11.24	373.32	18.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.02	68.02	68.02	188.99	188.99	188.99	23.37	7.57	5.92	10.21	11.41	6.13
Movement LOS	E	E	E	F	F	F	C	A	A	B	B	A
d_A, Approach Delay [s/veh]	68.02			188.99			8.57			11.22		
Approach LOS	E			F			A			B		
d_I, Intersection Delay [s/veh]	29.52											
Intersection LOS	C											
Intersection V/C	0.665											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	1.887	1.989	2.856	2.939
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	1.799	1.919	2.120	2.738
Bicycle LOS	A	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 7.9
 Level Of Service: A
 Volume to Capacity (v/c): 0.151

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	10	94	2	4	96	15	30	9	26	6	21	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	0	0	9	0	0	0	1	3	0	1
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]	10	100	2	4	108	15	31	9	28	9	22	23
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	25	1	1	27	4	8	2	7	2	6	6
Total Analysis Volume [veh/h]	10	100	2	4	108	15	31	9	28	9	22	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	826	843	822	831
Degree of Utilization, x	0.14	0.15	0.08	0.06





Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.47	0.53	0.27	0.21
95th-Percentile Queue Length [ft]	11.70	13.23	6.75	5.20
Approach Delay [s/veh]	8.04	8.03	7.77	7.63
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.92			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	70.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.847

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	190.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	120	591	57	93	1106	143	136	426	159	133	829	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	4	4	0	0	5	0	7	3	2
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]	124	609	65	100	1143	147	140	444	164	144	857	90
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	152	16	25	286	37	35	111	41	36	214	23
Total Analysis Volume [veh/h]	124	609	65	100	1143	147	140	444	164	144	857	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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.22	0.20	0.20	0.12	0.39	0.39	0.18	0.19	0.19	0.16	0.29	0.29
s, saturation flow rate [veh/h]	570	1683	1627	827	1683	1617	768	1683	1530	923	1683	1627
c, Capacity [veh/h]	168	640	618	323	640	614	304	640	582	407	640	618
d1, Uniform Delay [s]	54.86	48.26	48.28	34.05	62.00	62.00	35.77	47.38	47.44	30.09	53.84	53.85
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.88	3.20	3.31	2.47	42.12	44.94	4.97	2.75	3.04	2.40	7.99	8.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.54	0.54	0.31	1.03	1.03	0.46	0.50	0.50	0.35	0.75	0.75
d, Delay for Lane Group [s/veh]	79.74	51.46	51.59	36.52	104.12	106.94	40.73	50.13	50.48	32.49	61.83	62.11
Lane Group LOS	E	D	D	D	F	F	D	D	D	C	E	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.81	14.14	13.71	3.11	40.04	38.95	4.24	12.85	11.80	4.21	22.69	22.01
50th-Percentile Queue Length [ft/ln]	120.15	353.54	342.66	77.85	1000.9	973.64	105.94	321.19	294.96	105.24	567.37	550.16
95th-Percentile Queue Length [veh/ln]	8.40	20.31	19.78	5.61	51.38	50.39	7.61	18.73	17.43	7.57	30.51	29.70
95th-Percentile Queue Length [ft/ln]	210.03	507.73	494.46	140.13	1284.4	1259.6	190.34	468.14	435.79	189.36	762.69	742.50

Movement, Approach, & Intersection Results

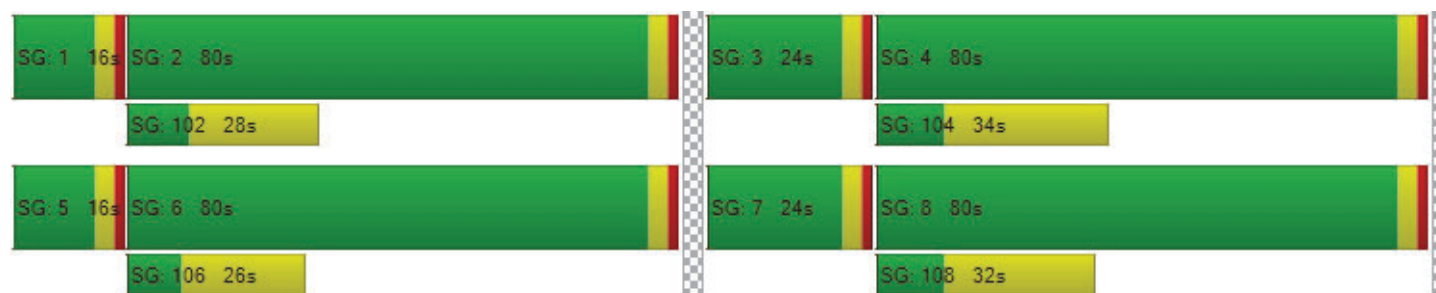
d_M, Delay for Movement [s/veh]	79.74	51.52	51.59	36.52	105.32	106.94	40.73	50.23	50.48	32.49	61.95	62.11
Movement LOS	E	D	D	D	F	F	D	D	D	C	E	E
d_A, Approach Delay [s/veh]	55.91			100.54			48.51			58.07		
Approach LOS	E			F			D			E		
d_I, Intersection Delay [s/veh]	70.53											
Intersection LOS	E											
Intersection V/C	0.847											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.854	2.848	2.771	2.723
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	2.218	2.706	2.177	2.460
Bicycle LOS	B	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	22	71	12	34	62	39	26	554	26	15	991	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	0	12	3	3	3	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
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	73	12	36	64	52	30	574	30	15	1027	15
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	18	3	9	16	13	8	144	8	4	257	4
Total Analysis Volume [veh/h]	29	73	12	36	64	52	30	574	30	15	1027	15
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	77.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.08	0.10	0.04	0.18	0.18	0.01	0.31	0.31
s, saturation flow rate [veh/h]	1506	1488	830	1683	1654	1001	1683	1674
c, Capacity [veh/h]	468	462	485	720	708	627	720	717
d1, Uniform Delay [s]	35.96	36.99	13.37	26.36	26.37	9.71	31.31	31.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	1.90	0.24	1.82	1.85	0.07	6.27	6.30
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	0.24	0.33	0.06	0.42	0.42	0.02	0.73	0.73
d, Delay for Lane Group [s/veh]	37.19	38.89	13.61	28.17	28.22	9.78	37.58	37.61
Lane Group LOS	D	D	B	C	C	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.01	4.14	0.35	7.08	6.98	0.17	14.95	14.89
50th-Percentile Queue Length [ft/ln]	75.15	103.57	8.70	177.07	174.62	4.21	373.85	372.13
95th-Percentile Queue Length [veh/ln]	5.41	7.46	0.63	11.45	11.32	0.30	21.30	21.21
95th-Percentile Queue Length [ft/ln]	135.27	186.42	15.67	286.19	282.97	7.58	532.40	530.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.19	37.19	37.19	38.89	38.89	38.89	13.61	28.20	28.22	9.78	37.60	37.61
Movement LOS	D	D	D	D	D	D	B	C	C	A	D	D
d_A, Approach Delay [s/veh]	37.19			38.89			27.51			37.20		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	34.19											
Intersection LOS	C											
Intersection V/C	0.465											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.849	1.881	2.696	2.693
Crosswalk LOS	A	A	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	1.748	1.810	2.083	2.432
Bicycle LOS	A	A	B	B

Sequence

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




Intersection Level Of Service Report
Intersection 5: Site Driveway Intersection

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 36.1
 Level Of Service: E
 Volume to Capacity (v/c): 0.073

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	576	1052	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	8	15	0	3	21
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	8	15	593	1087	21
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]	2	2	4	148	272	5
Total Analysis Volume [veh/h]	9	8	15	593	1087	21
Pedestrian Volume [ped/h]	0		0		0	

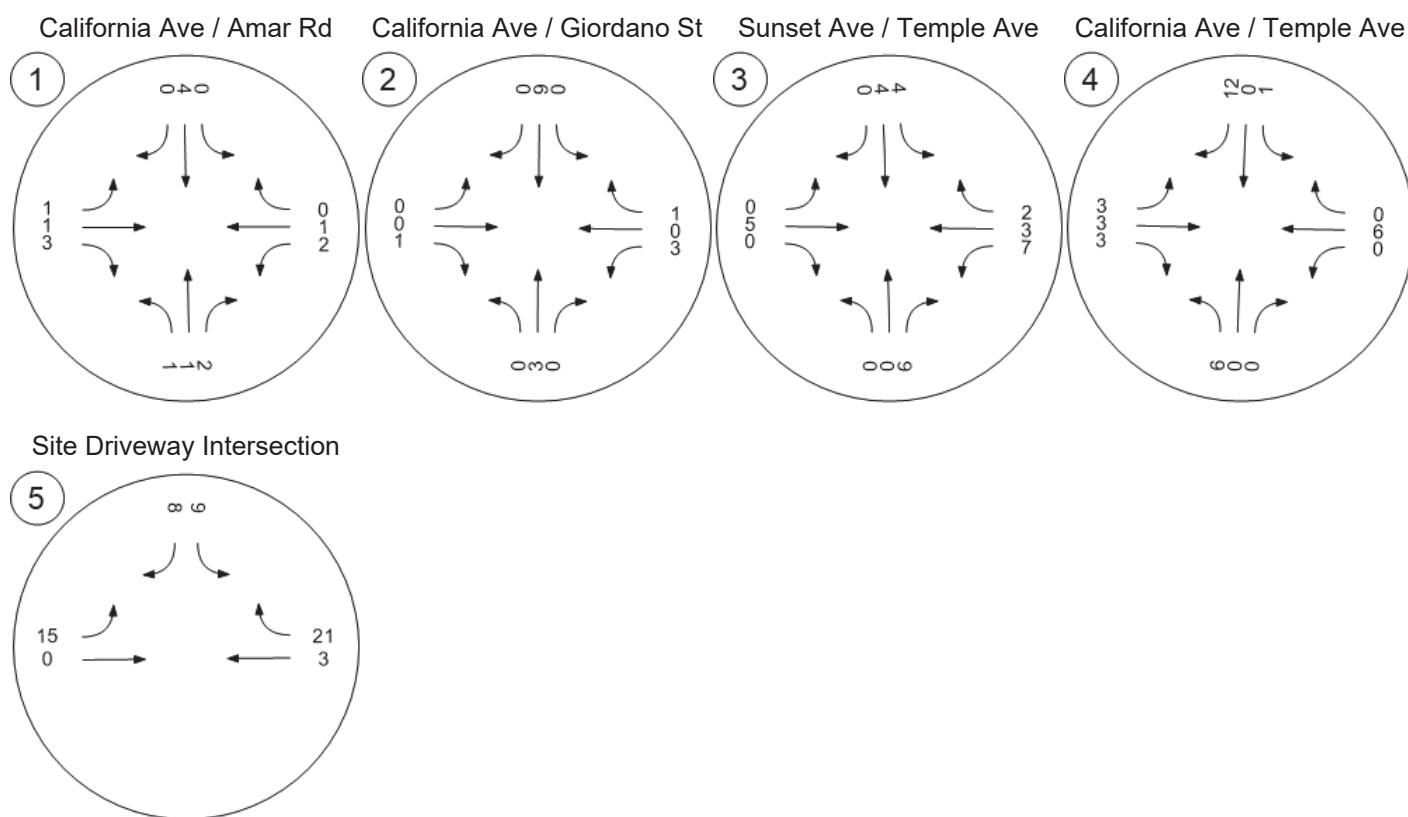
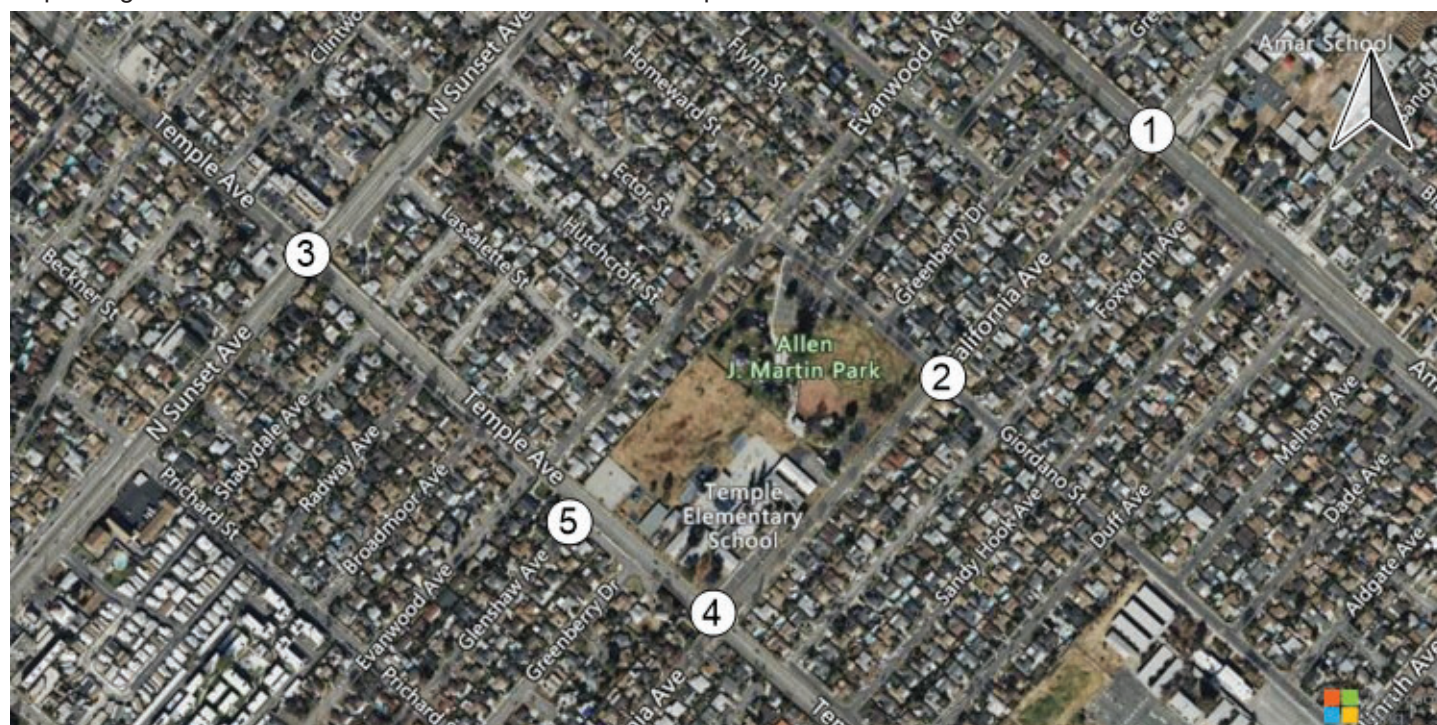
Intersection Settings

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	0.07	0.02	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	36.14	14.44	10.89	0.00	0.00	0.00
Movement LOS	E	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.29	0.29	0.07	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.32	7.32	1.84	0.92	0.00	0.00
d_A, Approach Delay [s/veh]	25.93		0.27		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.35					
Intersection LOS	E					

Report Figure 7209074d: Traffic Volume - Net New Site Trips



SGV Aquatics Center

Vistro File: J:\...\SGV Puente Aqua TIS-v4_NEW.vistro

Scenario 9 Fut_W_PROJ_PM

Report File: J:\...\Fut_W_Proj_PMv2.pdf

11/17/2021

Intersection Analysis Summary





ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	California Ave / Amar Rd	Signalized	HCM 6th Edition	NB Thru	0.691	60.1	E
2	California Ave / Giordano St	All-way stop	HCM 6th Edition	SB Thru	0.457	10.2	B
3	Sunset Ave / Temple Ave	Signalized	HCM 6th Edition	NB Right	0.929	100.5	F
4	California Ave / Temple Ave	Signalized	HCM 6th Edition	NB Thru	0.600	37.5	D
5	Site Driveway Intersection	Two-way stop	HCM 6th Edition	SB Left	0.132	31.7	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: California Ave / Amar Rd

Control Type:	Signalized	Delay (sec / veh):	60.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

Intersection Setup

Name	California			California			Amar			Amar		
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	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	115.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Amar			Amar		
Base Volume Input [veh/h]	42	200	59	66	105	69	52	1298	36	27	978	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	3	2	0	3	1	0	1	2	3	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
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	209	63	68	111	72	54	1338	39	31	1008	89
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	52	16	17	28	18	14	335	10	8	252	22
Total Analysis Volume [veh/h]	46	209	63	68	111	72	54	1338	39	31	1008	89
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	4	0	0	4	0	0	2	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	9	0	0	10	0	0	10	0
Maximum Green [s]	0	17	0	0	17	0	0	92	0	0	92	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	0.0	5.0	0.0	0.0	5.0	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	22	0	0	22	0	0	98	0	0	98	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0
Walk [s]	0	9	0	0	9	0	0	8	0	0	8	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.5	0.0	0.0	3.5	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50
g_i, Effective Green Time [s]	17	17	91	91	91	91	91	91
g / C, Green / Cycle	0.13	0.13	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.22	0.23	0.11	0.42	0.03	0.08	0.31	0.06
s, saturation flow rate [veh/h]	1417	1087	503	3204	1431	368	3204	1431
c, Capacity [veh/h]	217	177	331	2243	1001	228	2243	1001
d1, Uniform Delay [s]	57.54	57.86	14.95	10.04	6.01	19.97	8.53	6.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	233.09	216.66	1.06	1.18	0.07	1.24	0.65	0.18
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	1.47	1.42	0.16	0.60	0.04	0.14	0.45	0.09
d, Delay for Lane Group [s/veh]	290.63	274.51	16.01	11.22	6.09	21.21	9.19	6.41
Lane Group LOS	F	F	B	B	A	C	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	21.26	16.57	0.91	9.50	0.34	0.63	6.05	0.80
50th-Percentile Queue Length [ft/ln]	531.38	414.19	22.81	237.44	8.47	15.73	151.21	20.08
95th-Percentile Queue Length [veh/ln]	33.26	26.47	1.64	14.55	0.61	1.13	10.08	1.45
95th-Percentile Queue Length [ft/ln]	831.60	661.74	41.07	363.79	15.25	28.32	252.05	36.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	290.63	290.63	290.63	274.51	274.51	274.51	16.01	11.22	6.09	21.21	9.19	6.41
Movement LOS	F	F	F	F	F	F	B	B	A	C	A	A
d_A, Approach Delay [s/veh]	290.63			274.51			11.26			9.30		
Approach LOS	F			F			B			A		
d_I, Intersection Delay [s/veh]	60.08											
Intersection LOS	E											
Intersection V/C	0.691											

Other Modes

g_Walk,mi, Effective Walk Time [s]	12.0	12.0	13.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	53.55	53.55	52.65	52.65
I_p,int, Pedestrian LOS Score for Intersection	2.019	2.103	2.950	2.988
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	262	262	1400	1400
d_b, Bicycle Delay [s]	49.11	49.11	5.85	5.85
I_b,int, Bicycle LOS Score for Intersection	2.084	1.974	2.740	2.490
Bicycle LOS	B	A	B	B

Sequence

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







Intersection Level Of Service Report

Intersection 2: California Ave / Giordano St

Control Type: All-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 10.2
 Level Of Service: B
 Volume to Capacity (v/c): 0.457

Intersection Setup

Name	California			California			Giordano			Giordano		
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]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Giordano			Giordano		
Base Volume Input [veh/h]	27	155	14	11	329	15	14	18	19	7	19	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	8	3	1	7	0	0	0	1	1	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]	29	168	17	12	346	15	14	19	21	8	20	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	42	4	3	87	4	4	5	5	2	5	3
Total Analysis Volume [veh/h]	29	168	17	12	346	15	14	19	21	8	20	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	788	816	700	691
Degree of Utilization, x	0.27	0.46	0.08	0.06

Movement, Approach, & Intersection Results





95th-Percentile Queue Length [veh]	1.10	2.42	0.25	0.18
95th-Percentile Queue Length [ft]	27.58	60.52	6.25	4.60
Approach Delay [s/veh]	9.27	11.07	8.58	8.53
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	10.16			
Intersection LOS	B			

Intersection Level Of Service Report

Intersection 3: Sunset Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	100.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.929

Intersection Setup

Name	Sunset			Sunset			Temple			Temple		
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	0	1	0	0
Entry Pocket Length [ft]	155.00	100.00	100.00	150.00	100.00	100.00	195.00	100.00	100.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sunset			Sunset			Temple			Temple		
Base Volume Input [veh/h]	211	1267	211	104	794	160	207	825	133	83	466	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	10	3	0	0	0	5	0	7	5	4
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]	217	1309	227	110	818	165	213	855	137	92	485	114
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	327	57	28	205	41	53	214	34	23	121	29
Total Analysis Volume [veh/h]	217	1309	227	110	818	165	213	855	137	92	485	114
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	94.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	9	8	0	9	8	0	9	8	0	9	8	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	16	80	0	16	80	0	24	80	0	24	80	0
Vehicle Extension [s]	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0	2.5	2.0	0.0
Walk [s]	0	9	0	0	8	0	0	10	0	0	10	0
Pedestrian Clearance [s]	0	19	0	0	18	0	0	22	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	200	200	200	200	200	200	200	200	200	200	200	200
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	92	76	76	92	76	76	100	76	76	100	76	76
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.50	0.38	0.38	0.50	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.32	0.46	0.48	0.22	0.30	0.30	0.23	0.30	0.30	0.12	0.18	0.18
s, saturation flow rate [veh/h]	681	1683	1599	502	1683	1586	928	1683	1603	751	1683	1574
c, Capacity [veh/h]	228	640	608	167	640	603	413	640	609	290	640	598
d1, Uniform Delay [s]	57.35	62.00	62.00	50.57	54.96	54.98	31.60	55.03	55.10	35.32	47.08	47.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	48.60	109.45	126.72	18.46	9.66	10.23	4.56	9.78	10.34	2.85	2.60	2.80
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	0.95	1.21	1.25	0.66	0.79	0.79	0.52	0.79	0.80	0.32	0.48	0.49
d, Delay for Lane Group [s/veh]	105.95	171.45	188.72	69.03	64.62	65.21	36.16	64.81	65.43	38.17	49.67	49.94
Lane Group LOS	F	F	F	E	E	E	D	E	E	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.88	52.00	52.31	4.06	24.54	23.25	6.64	24.66	23.67	2.66	12.39	11.70
50th-Percentile Queue Length [ft/ln]	246.98	1299.9	1307.8	101.50	613.50	581.29	165.94	616.57	591.75	66.49	309.83	292.48
95th-Percentile Queue Length [veh/ln]	15.03	72.65	74.35	7.31	32.66	31.16	10.86	32.81	31.65	4.79	18.17	17.31
95th-Percentile Queue Length [ft/ln]	375.85	1816.2	1858.7	182.71	816.61	778.99	271.57	820.18	791.22	119.68	454.17	432.72

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	105.95	178.50	188.72	69.03	64.84	65.21	36.16	65.06	65.43	38.17	49.77	49.94
Movement LOS	F	F	F	E	E	E	D	E	E	D	D	D
d_A, Approach Delay [s/veh]	170.84			65.32			60.00			48.25		
Approach LOS	F			E			E			D		
d_I, Intersection Delay [s/veh]	100.49											
Intersection LOS	F											
Intersection V/C	0.929											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	14.0	12.0	13.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	86.49	86.49	88.36	87.42
I_p,int, Pedestrian LOS Score for Intersection	2.933	2.986	2.867	2.765
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	760	760	760	760
d_b, Bicycle Delay [s]	38.44	38.44	38.44	38.44
I_b,int, Bicycle LOS Score for Intersection	3.006	2.461	2.554	2.130
Bicycle LOS	C	B	B	B

Sequence





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



Intersection Level Of Service Report
Intersection 4: California Ave / Temple Ave

Control Type:	Signalized	Delay (sec / veh):	37.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

Intersection Setup

Name	California			California			Temple			Temple		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	120.00	100.00	100.00	130.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	California			California			Temple			Temple		
Base Volume Input [veh/h]	35	197	55	29	112	25	53	1062	30	34	587	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	0	0	9	11	6	7	0	5	1
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]	42	203	57	30	115	35	66	1100	38	35	610	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	51	14	8	29	9	17	275	10	9	153	9
Total Analysis Volume [veh/h]	42	203	57	30	115	35	66	1100	38	35	610	36
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	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]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	85.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	ProtPer	Permis	Permis	ProtPer	Permis	Permis
Signal Group	0	4	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	8	0	0	8	0	4	13	0	5	14	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	0.0	3.0	4.5	0.0	3.0	4.5	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.5	0.0	0.0
Split [s]	0	43	0	0	43	0	28	61	0	28	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	12	0	0	12	0	0	11	0	0	11	0
Pedestrian Clearance [s]	0	18	0	0	18	0	0	13	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	1.5	2.5	0.0	1.5	2.5	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	132	132	132	132	132	132	132	132
L, Total Lost Time per Cycle [s]	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	0.00	2.50	2.50	0.00	2.50	2.50
g_i, Effective Green Time [s]	38	38	85	57	57	85	57	57
g / C, Green / Cycle	0.29	0.29	0.64	0.43	0.43	0.64	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.19	0.13	0.07	0.34	0.34	0.04	0.19	0.19
s, saturation flow rate [veh/h]	1566	1419	982	1683	1663	801	1683	1650
c, Capacity [veh/h]	482	440	610	720	712	461	720	706
d1, Uniform Delay [s]	41.14	37.68	10.29	32.71	32.72	14.97	26.78	26.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.05	2.80	0.36	8.81	8.93	0.32	2.05	2.09
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	0.63	0.41	0.11	0.79	0.79	0.08	0.45	0.45
d, Delay for Lane Group [s/veh]	47.19	40.47	10.65	41.52	41.65	15.29	28.82	28.88
Lane Group LOS	D	D	B	D	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.45	5.06	0.77	17.44	17.28	0.41	7.72	7.59
50th-Percentile Queue Length [ft/ln]	236.20	126.41	19.26	436.07	431.94	10.25	193.00	189.86
95th-Percentile Queue Length [veh/ln]	14.49	8.74	1.39	24.29	24.09	0.74	12.28	12.11
95th-Percentile Queue Length [ft/ln]	362.22	218.60	34.66	607.30	602.37	18.45	306.92	302.85

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.19	47.19	47.19	40.47	40.47	40.47	10.65	41.59	41.65	15.29	28.85	28.88
Movement LOS	D	D	D	D	D	D	B	D	D	B	C	C
d_A, Approach Delay [s/veh]	47.19			40.47			39.89			28.16		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	37.49											
Intersection LOS	D											
Intersection V/C	0.600											

Other Modes

g_Walk,mi, Effective Walk Time [s]	15.0	15.0	16.0	16.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.85	51.85	50.97	50.97
I_p,int, Pedestrian LOS Score for Intersection	1.991	2.009	2.743	2.722
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	576	576	856	856
d_b, Bicycle Delay [s]	33.47	33.47	21.59	21.59
I_b,int, Bicycle LOS Score for Intersection	2.058	1.857	2.553	2.121
Bicycle LOS	B	A	B	B

Sequence

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






Intersection Level Of Service Report

Intersection 5: Site Driveway Intersection

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 31.7
 Level Of Service: D
 Volume to Capacity (v/c): 0.132

Intersection Setup

Name	Site Driveway		Temple		Temple	
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]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Site Driveway		Temple		Temple	
Base Volume Input [veh/h]	0	0	0	1140	647	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	16	14	3	0	20
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]	20	16	14	1177	666	20
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]	5	4	4	294	167	5
Total Analysis Volume [veh/h]	20	16	14	1177	666	20
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	0.13	0.02	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	31.74	13.41	9.05	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.55	0.55	0.05	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.65	13.65	1.18	0.59	0.00	0.00
d_A, Approach Delay [s/veh]	23.59		0.11		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.51					
Intersection LOS	D					

Report Figure 7209074d: Traffic Volume - Net New Site Trips

