TRAFFIC IMPACT REPORT

ALAMO STREET MIXED USE

CITY OF SIMI VALLEY

VENTURA COUNTY, CALIFORNIA

LICENSED PROFESSIONAL ENGINEER
DONSON H. LIU
TR 2743
EXP. 3/31/19
TRAFFIC
STATE OF CALIFORNIA

LSA

May 2018

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CITY OF SIMI VALLEY

VENTURA COUNTY, CALIFORNIA

Submitted to:

AMG & Associates, LLC
16633 Ventura Boulevard, Suite 1014
Encino, California 91436

Prepared by:

LSA Associates, Inc.
20 Executive Park
Irvine, California 92614
(949) 553-0666

Project No. AMG1801

LSA

May 2018

EXECUTIVE SUMMARY

The purpose of this Traffic Impact Report (TIR) is to identify potential traffic and circulation impacts on local intersections associated with the development of the Alamo Street Mixed Use Project (project) located on the northeast corner of Tapo Street/Alamo Street in Simi Valley, California. The proposed project includes approximately 278 apartment dwelling units (DU) and 8,100 square feet (sf) of commercial use. The proposed project will replace 69,811 sf of the existing 77,911 sf Bellwood Shopping Center and remodel 8,100 sf for ongoing commercial use.

As discussed in the Project Trip Generation section, the proposed project is anticipated to generate an additional 3,123 average daily trips (ADT), 251 a.m. peak-hour trips (107 inbound and 144 outbound), and 121 p.m. peak-hour trips (79 inbound and 42 outbound) over the existing Bellwood Shopping Center.

This report includes analysis of the study area intersections in the following scenarios, as determined by the City's Traffic Engineer:

1. Existing Baseline
2. Existing with Project
3. Future (2030) without Project
4. Future (2030) with Project

Based on the analysis in this report, the proposed project can be implemented without significantly affecting the circulation system. All study area intersections and California Department of Transportation (Caltrans) ramp intersections are anticipated to operate at a satisfactory level of service in both the a.m. and p.m. peak hours with the addition of project traffic under existing and future conditions.

Project access driveways were analyzed to ensure that the project will not create issues with safety or conflict with existing flow along the surrounding circulation system. This TIR provides an updated analysis of access issues covered in the Alamo Street Mixed Use Access Analysis (LSA, March 2017). The updated analysis includes an inbound queuing analysis at the three project driveways and gate-stacking queuing analysis for the project residents.

Nearby intersections were analyzed to determine whether improvements were warranted based on existing and future traffic operations. The intersection of Tapo Street/Alamo Street currently operates with northbound-southbound protected-permitted left turns and eastbound-westbound permitted left turns. However, eastbound-westbound protected left-turn phasing is not warranted at Tapo Street/Alamo Street. A traffic signal warrant analysis was conducted for the unsignalized intersection of Tapo Street/Adam Road and a traffic signal was found to not be warranted. An analysis of the last five year period for which complete accident data is available near the intersection of Tapo Street/Alamo Street revealed that the number and type of collisions do not meet accepted state safety improvement thresholds nor are they correctable through roadway and intersection modification. As such, physical changes to the roadway or intersection geometry are not recommended.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily trips
Caltrans	California Department of Transportation
CAMUTCD	*California Manual on Uniform Traffic Control Devices*
CEQA	California Environmental Policy Act
CMP	Congestion Management Program
DU	dwelling unit
FHWA	Federal Highway Administration
HDM	*Highway Design Manual*
ICU	intersection capacity utilization
ITE	Institution of Transportation Engineers
LOS	level of service
mph	miles per hour
NDS	National Data and Surveying Services
RIRO	right-in, right-out
sf	square feet/foot
SR-118	State Route 118
SVTAM	Simi Valley Transportation Analysis Model
SWITRS	Statewide Integrated Traffic Records System
TIR	Traffic Impact Report
v/c	volume-to-capacity

INTRODUCTION

LSA has prepared this analysis to identify the short-term and long-range traffic impacts as a result of the development of the proposed Alamo Mixed Use Project (project) on the northeast corner of Tapo Street/Alamo Street in the City of Simi Valley, California (City). This analysis has been conducted consistent with the City's *Guidelines for the Preparation of Traffic Impact Reports* (2007), the Ventura County Transportation Commission Congestion Management Program (CMP), and applicable provisions of the California Environmental Quality Act (CEQA). The scope of this traffic report was discussed with the City Traffic Engineer prior to its preparation.

PROJECT DESCRIPTION

The Alamo Street Mixed Use Project is located on the northeast corner of Tapo Street/Alamo Street in Simi Valley, California. The existing Bellwood Shopping Center consists of 77,911 square feet (sf) of commercial use. The project includes the demolition of 69,811 sf of the Bellwood Shopping Center and construction of approximately 278 apartment dwelling units (DU). The project will also remodel 8,100 sf of the existing commercial use on the northwest corner of the Bellwood Shopping Center. The remodeled 8,100 sf will continue to operate as commercial use. The project site is bounded by Tapo Street to the west, Alamo Street to the south, Lubbock Court to the north, and existing residential uses to the north and east.

Access to the proposed project will be provided via three driveways: a full-access driveway and a right-in, right-out (RIRO) driveway adjacent to the commercial use and the western residential gate along Tapo Street, and a full-access driveway with direct access to the eastern residential gate along Alamo Street. The project will remove the other two existing driveways on Alamo Street. Parking for the commercial use will be located around the commercial building. Residents of the project will park within the gated portion of the parking structure. Guest parking is located within the ungated portion of the parking structure located near the leasing office.

The study area includes the following intersections identified by the City's Traffic Engineer:

1. Tapo Canyon Road/Alamo Street;
2. Tapo Canyon Road/State Route 118 (SR-118) westbound ramps;
3. Tapo Canyon Road/SR-118 eastbound ramps;
4. Tapo Street/Alamo Street;
5. Tapo Street/Cochran Street;
6. Stearns Street/Alamo Street;
7. Stearns Street/ SR-118 westbound ramps; and
8. Stearns Street/ SR-118 eastbound ramps.

Figure 1 shows the location of the proposed project and study area intersections. Figure 2 illustrates the site plan for the proposed project.

STREET SYSTEM

The proposed project is located on the northeast corner of Tapo Street and Alamo Street. The following provides a description of the existing roadways in the vicinity of the project.

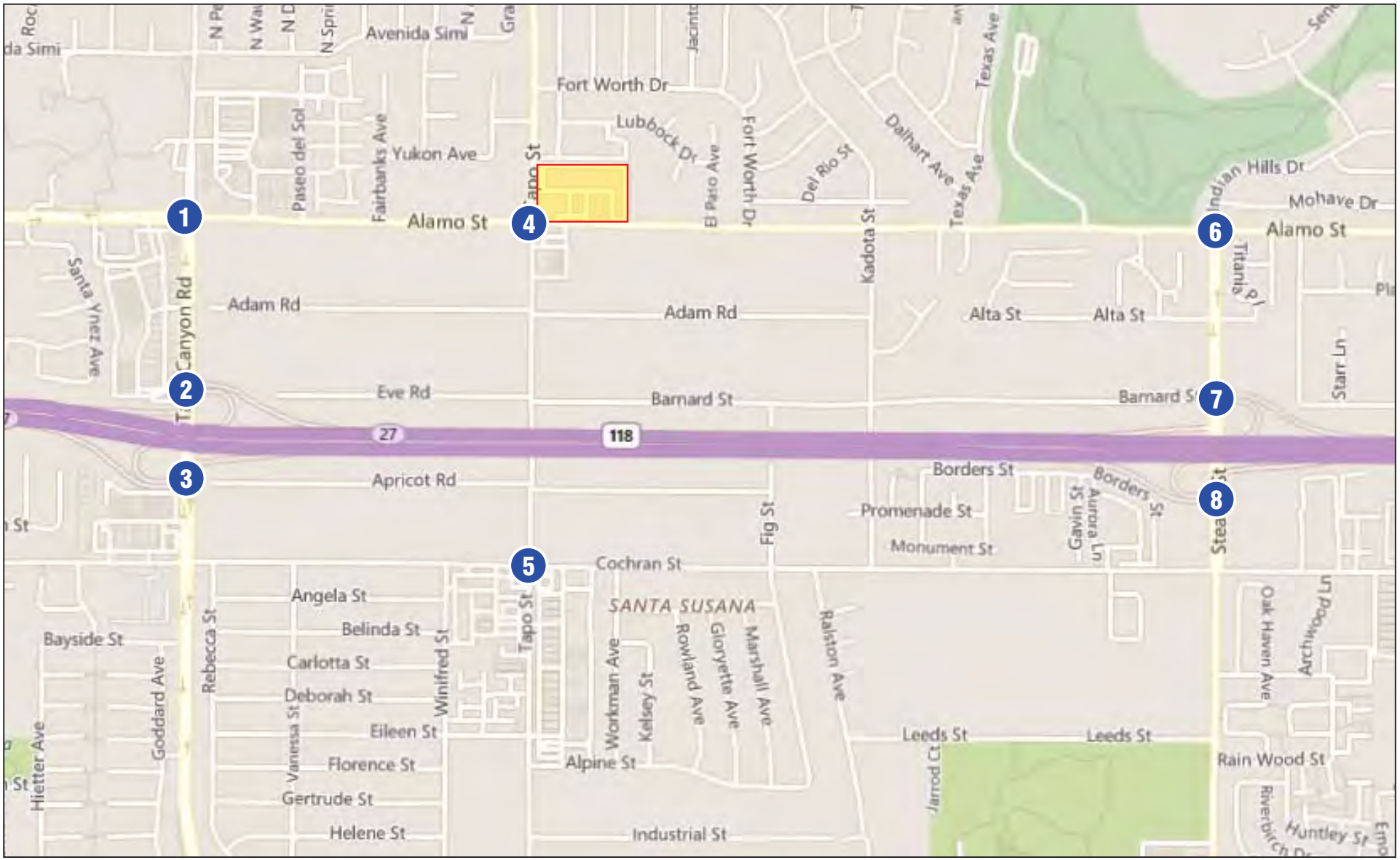


FIGURE 1

LSA

LEGEND

- Project Site

- Study Area Intersection

N

0 600 1200

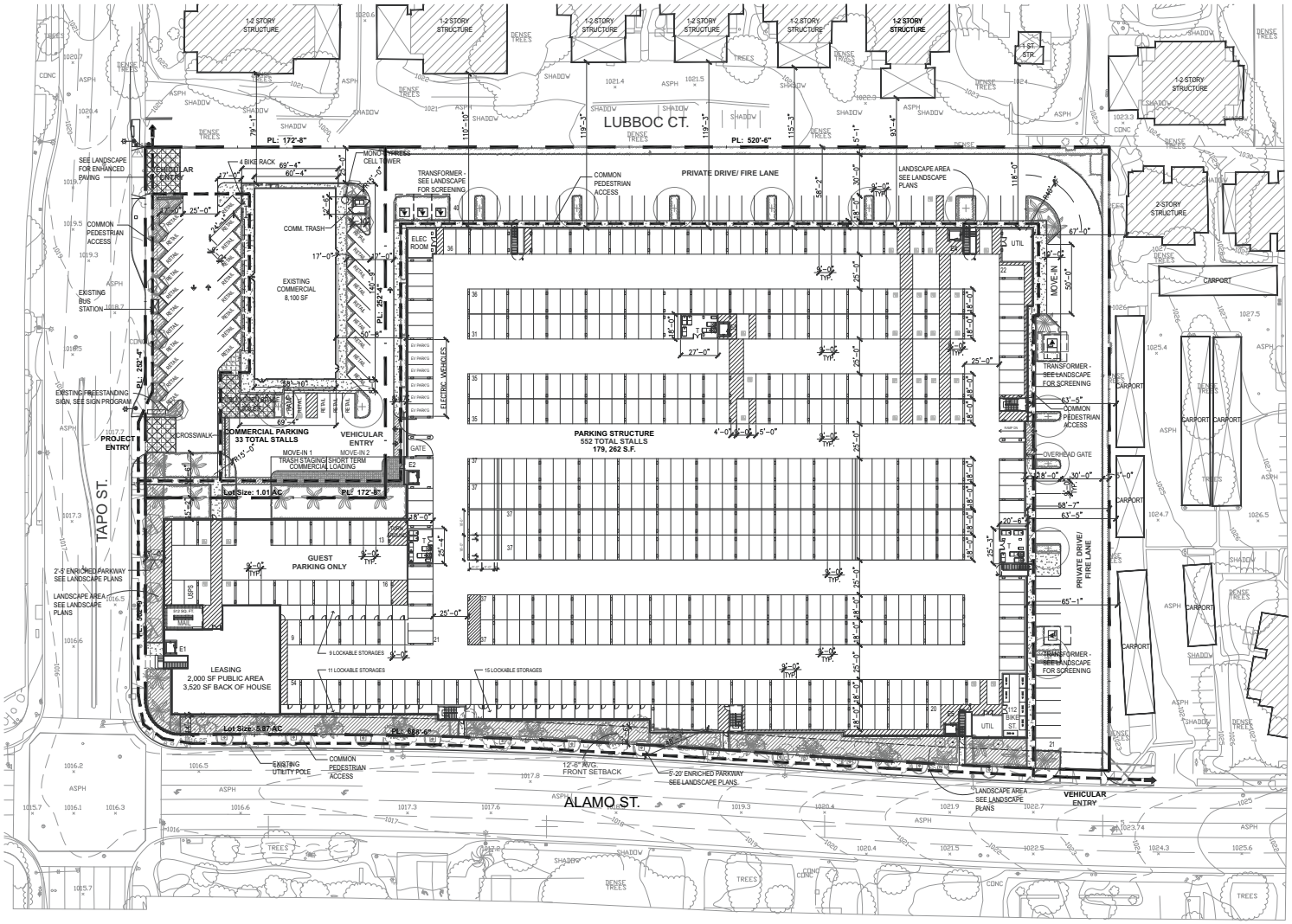
FEET

SOURCE: Bing Maps

Alamo Mixed Use

Project Location and Study Area Intersections

I:\AMG1801\G\Location&Ints.cdr (3/30/2018)



LSA

FIGURE 2

N

0 60 120

FEET

SOURCE: Architects Orange

Alamo Mixed Use

Site Plan

I:\AMG1801\G\Site Plan.cdr (3/30/2018)

- **Tapo Street:** Tapo Street is a north-south roadway classified as a Secondary Arterial according to the City's General Plan Mobility and Infrastructure element. Adjacent to the project site, Tapo Street is an undivided four-lane roadway divided by a raised median as it approaches Alamo Street. The posted speed limit is 45 miles per hour (mph). Sidewalks are provided on both sides of the street. Although the Bicycle Master Plan shows that this area is supposed to have Class II bike lanes, this street does not have bike lanes along the project frontage. A 5-foot widening would be required to provide the bike lanes. On-street parking is not permitted. There is an existing bus turnout for Simi Valley Transit buses on the project frontage by the commercial portion of the project.
- **Alamo Street:** Alamo Street is an east-west roadway classified as a Secondary Arterial according to the City's General Plan Mobility and Infrastructure element. Adjacent to the project site, Alamo Street is a four-lane roadway divided by a two-way left-turn lane. The posted speed limit is 45 mph. Sidewalks and bike lanes are provided on both sides of the street. On-street parking is not permitted.

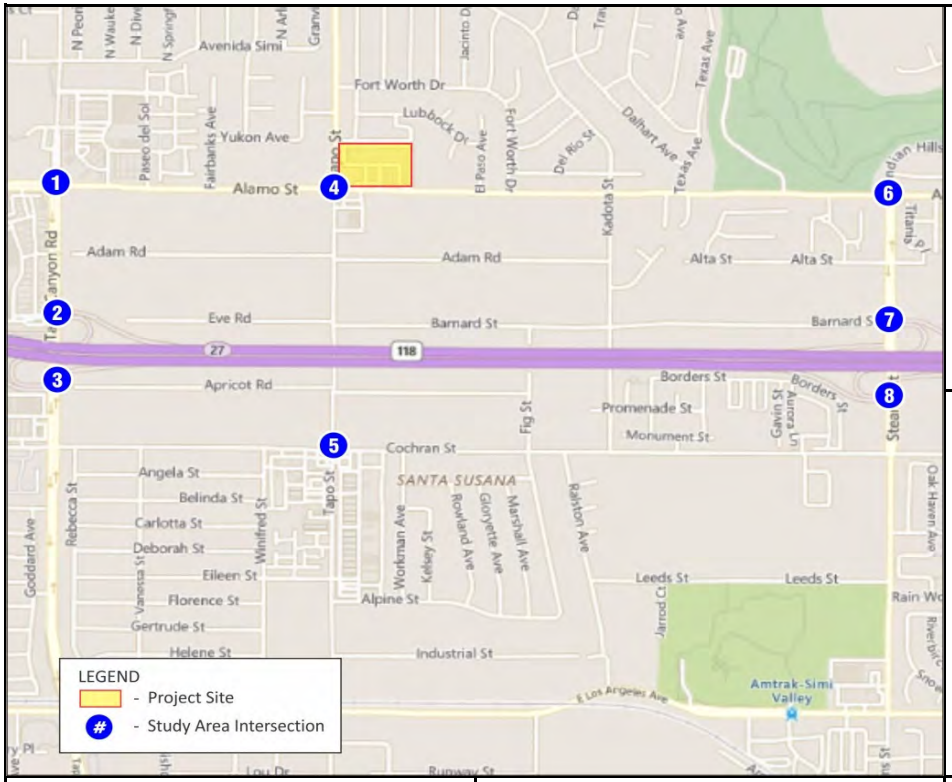
As the Congestion Management Agency, the Ventura County Transportation Commission's CMP designates Tapo Canyon Road (between SR-118 and Madera Road) and SR-118 (between SR-126 and the Santa Barbara County line) as part of the CMP network. The SR-118 ramp intersections (i.e., study area intersections 2, 3, 7, and 8) are also part of the CMP network.

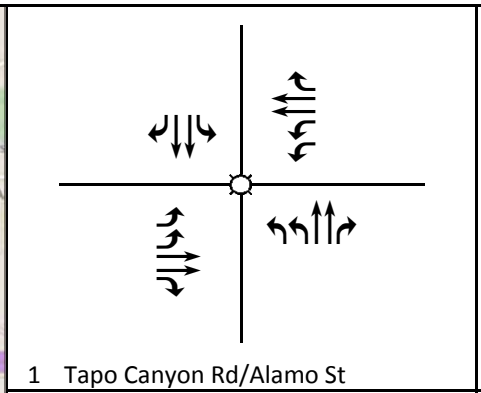
All eight study area intersections are signalized. Figure 3 illustrates the existing geometrics and traffic control devices at each study area intersection.

TRIP GENERATION FORECAST

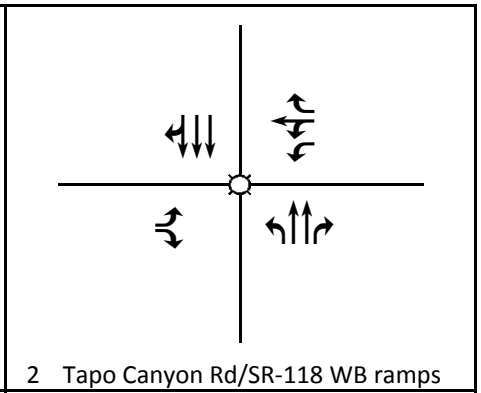
Project trips were developed in order to evaluate the impact of project traffic on the surrounding circulation system. As the proposed project would replace 69,811 sf of the existing Bellwood Shopping Center, the project's net trip generation potential would be lessened by the existing trip generation that currently exists on the site. In order to capture the existing measured trip generation of the Bellwood Shopping Center, vehicle turning volumes were collected by National Data and Surveying Services (NDS), an independent surveying company, at the five driveways during the peak morning (7:00 a.m.–9:00 a.m.) and evening (4:00 p.m.–6:00 p.m.) commute periods on Tuesday, March 6, 2018. All local schools were in session on this day and no abnormal occurrences were observed by NDS staff. All traffic volume data sheets, including a summary table of the traffic volumes taken at the Bellwood Shopping Center's driveways, are provided in Appendix A.

Trip rates contained in the Institution of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition, were used to calculate the potential trip generation for the 278 apartments and 8,100 sf of commercial use shown in Table A. As shown in Table A, the proposed project is forecast to generate 3,123 ADT, 284 a.m. peak-hour trips (128 inbound and 156 outbound), and 240 p.m. peak-hour trips (138 inbound and 102 outbound). When the measured trip generation of the existing Bellwood Shopping Center is taken into account, the proposed project is forecast to generate an additional 1,944ADT, 251 a.m. peak-hour trips (107 inbound and 144 outbound), and 121 p.m. peak-hour trips (79 inbound and 42 outbound). The net trip generation is calculated by subtracting the trips generated from the existing land uses from the trips generated from the project's land uses.

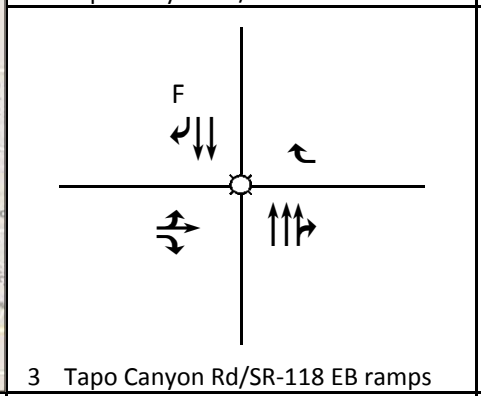




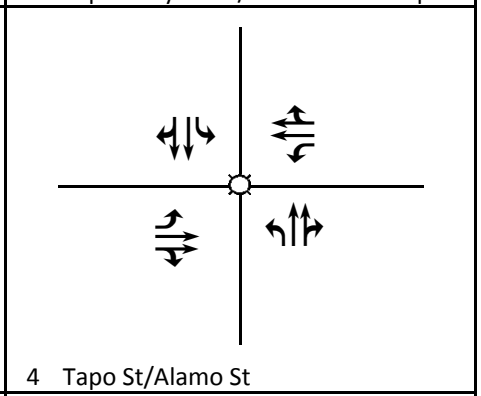
1 Tapo Canyon Rd/Alamo St



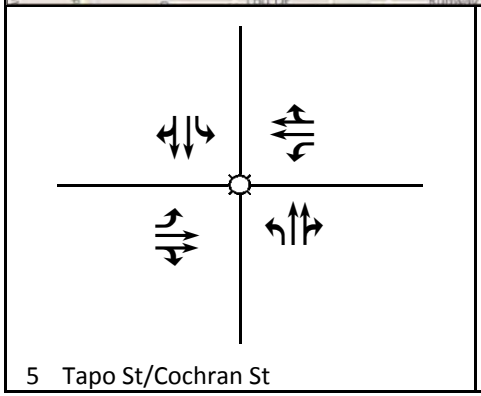
2 Tapo Canyon Rd/SR-118 WB ramps



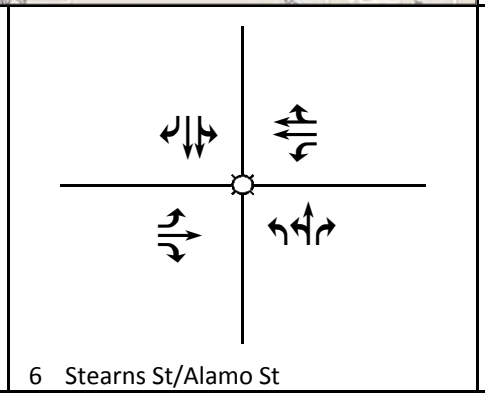
3 Tapo Canyon Rd/SR-118 EB ramps



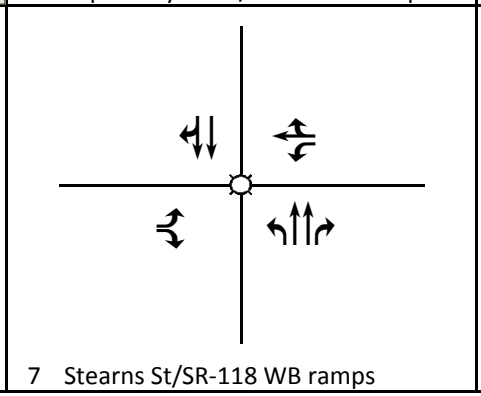
4 Tapo St/Alamo St



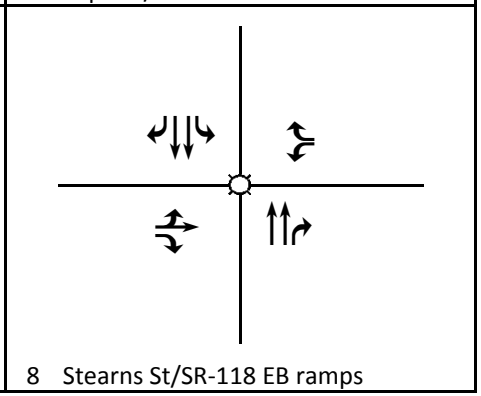
5 Tapo St/Cochran St



6 Stearns St/Alamo St



7 Stearns St/SR-118 WB ramps



8 Stearns St/SR-118 EB ramps

FIGURE 3

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LEGEND

Signal

F Free Right Turn

Alamo Street Mixed Use

Existing Intersection Geometrics

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Table A: Simi Valley Mixed-Use Project Trip Generation Summary

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Multifamily Housing (Low Rise) (220)		DU	7.32	0.11	0.35	0.46	0.35	0.21	0.56
Shopping Center (820)		TSF	Regression Equation						
Project Trip Generation									
Apartment	278	DU	2,035	31	97	128	97	58	155
Commercial	8.100	TSF	1,088	97	59	156	41	44	85
Total			**3,123**	**128**	**156**	**284**	**138**	**102**	**240**
Existing Trip Generation									
Bellwood Shopping Center[2]	77.911	TSF	1,179	21	12	33	59	60	119
Net Project Total			**1,944**	**107**	**144**	**251**	**79**	**42**	**121**

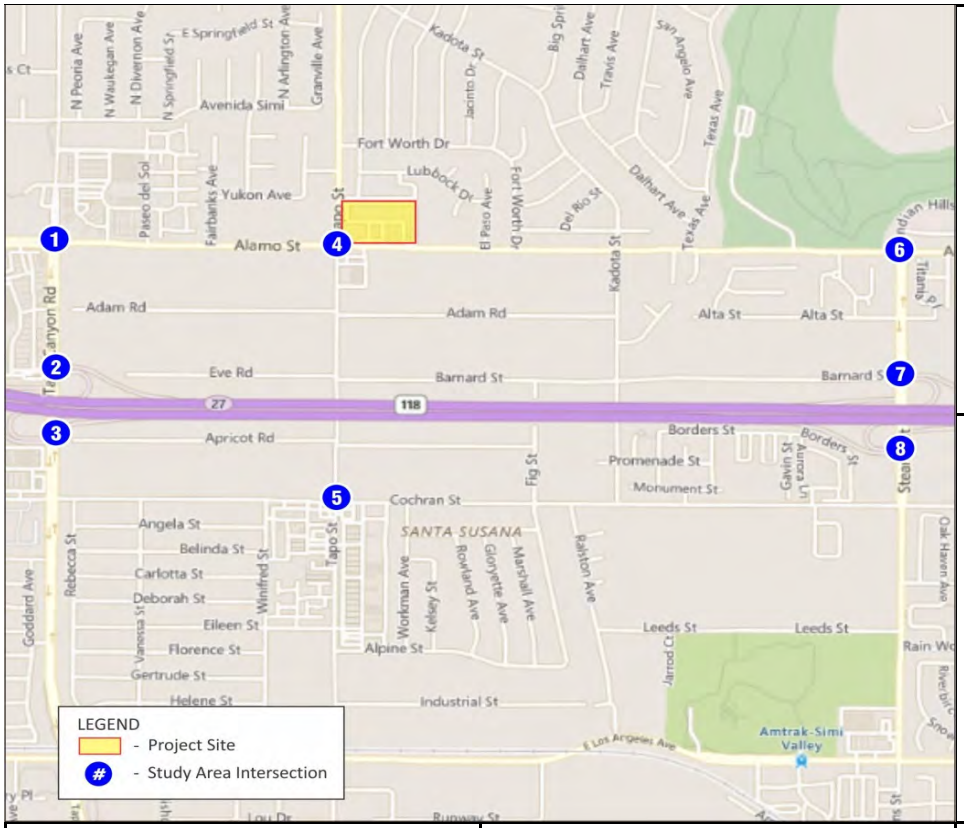
[1] Trip Rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition (2017).
[2] Existing driveway volumes were collected on Tuesday, March 6, 2018 and represent the existing occupied portion of the shopping center.
[3] Existing ADT was derived by increasing existing p.m. peak hour volumes proportional to the rate between p.m. peak hour and ADT rates in ITE.
ADT = average daily traffic DU = dwelling unit TSF = thousand square feet

TRAFFIC VOLUMES, DISTRIBUTION, AND ASSIGNMENT

In order to establish existing traffic conditions, vehicle turning volumes were collected by NDS for the study area intersections during the peak morning and evening commute periods. Peak-hour intersection turn volumes were surveyed on a typical weekday (Tuesday, March 6, 2018) at the study area intersections. These volumes were taken in 15-minute increments and then totaled as hourly volumes, which is the standard procedure for traffic volume data collection. Figure 4 presents the existing a.m. and p.m. peak-hour turn movement volumes for the study area intersections.

Trip distribution defines the regional origins and destinations for a project. Based on the location of the project and the local travel patterns through the intersection of Tapo Street/Alamo Street, traffic from the residential component of the project site was distributed 50 percent east on SR-118 via Stearns Street, 30 percent west on SR-118 via Tapo Canyon Road, 5 percent west on Alamo Street, 5 percent south on Tapo Street, 5 percent north on Tapo Street, and 5 percent north on Kadota Street. Based on the location of the project and the anticipated trip origins and destinations, traffic from the commercial component of the project site was distributed 30 percent north on Tapo Street, 10 percent south on each north-south arterial in the study area (i.e., Tapo Canyon Road, Tapo Street, Kadota Street, and Stearns Street), 10 percent west on Alamo Street, 10 percent north on Tapo Canyon Road, 5 percent east on Alamo Street, and 5 percent north on Kadota Street. These distributions were developed through cooperation with the City Traffic Engineer. Figure 5 shows the regional trip distribution and assignment for the proposed project.

It should be noted that some movements show a negative net project trip assignment. This is due to fact that existing commercial trip generation is higher than the project's commercial trip generation during the p.m. peak hour. Traffic volumes for the existing with project scenario were calculated by adding project trips to the existing traffic volumes. Figure 6 presents the existing with project traffic volumes.



1 Tapo Canyon Rd/Alamo St

144 / 158 ↱	149 / 131 ↰	47 / 66 ↱
258 / 454 →	537 / 385 ↓	474 / 346 ←
205 / 197 ↳	71 / 99 ↳	375 / 243 ↰
	231 / 276 ↰	
	428 / 562 ↑	
	171 / 334 ↱	

2 Tapo Canyon Rd/SR-118 WB ramps

7 / 27 ↱	14 / 19 ↰	295 / 457 ↱
96 / 217 ↳	1041 / 910 ↓	47 / 91 ←
		588 / 620 ↰
	57 / 144 ↰	
	585 / 761 ↑	
	323 / 325 ↱	

3 Tapo Canyon Rd/SR-118 EB ramps

334 / 399 ↱	385 / 304 ↰	45 / 40 ↱
4 / 2 →	868 / 985 ↓	
322 / 264 ↳	7 / 8 ↳	
	1172 / 1307 →	
	35 / 28 ↱	

4 Tapo St/Alamo St

115 / 168 ↱	290 / 127 ↰	185 / 86 ↱
238 / 457 →	359 / 169 ↓	407 / 305 ←
122 / 178 ↳	212 / 75 ↳	76 / 54 ↰
	116 / 179 ↰	
	298 / 220 ↑	
	42 / 85 ↱	

5 Tapo St/Cochran St

170 / 135 ↱	193 / 115 ↰	129 / 76 ↱
337 / 471 →	361 / 305 ↓	336 / 320 ←
112 / 184 ↳	152 / 90 ↳	133 / 119 ↰
	76 / 217 ↰	
	279 / 360 ↑	
	82 / 155 ↱	

6 Stearns St/Alamo St

14 / 39 ↱	38 / 28 ↰	1 / 2 ↱
280 / 223 →	46 / 25 ↓	312 / 158 ←
515 / 322 ↳	1 / 1 ↳	56 / 26 ↰
	383 / 384 ↰	
	16 / 43 ↑	
	31 / 73 ↱	

7 Stearns St/SR-118 WB ramps

9 / 11 ↱	6 / 12 ↰	157 / 238 ↱
87 / 56 ↳	533 / 343 ↓	81 / 113 ←
		278 / 391 ↰
	26 / 24 ↰	
	280 / 358 ↑	
	335 / 222 ↱	

8 Stearns St/SR-118 EB ramps

43 / 131 ↱	393 / 162 ↰	20 / 34 ↱
19 / 41 →	489 / 597 ↓	1 / 1 ←
260 / 315 ↳	29 / 53 ↳	4 / 7 ↰
	956 / 770 ↑	
	4 / 7 ↱	

LSA

FIGURE 4

LEGEND
XXX / YYY AM / PM Volume

Alamo Street Mixed Use
Existing Traffic Volumes

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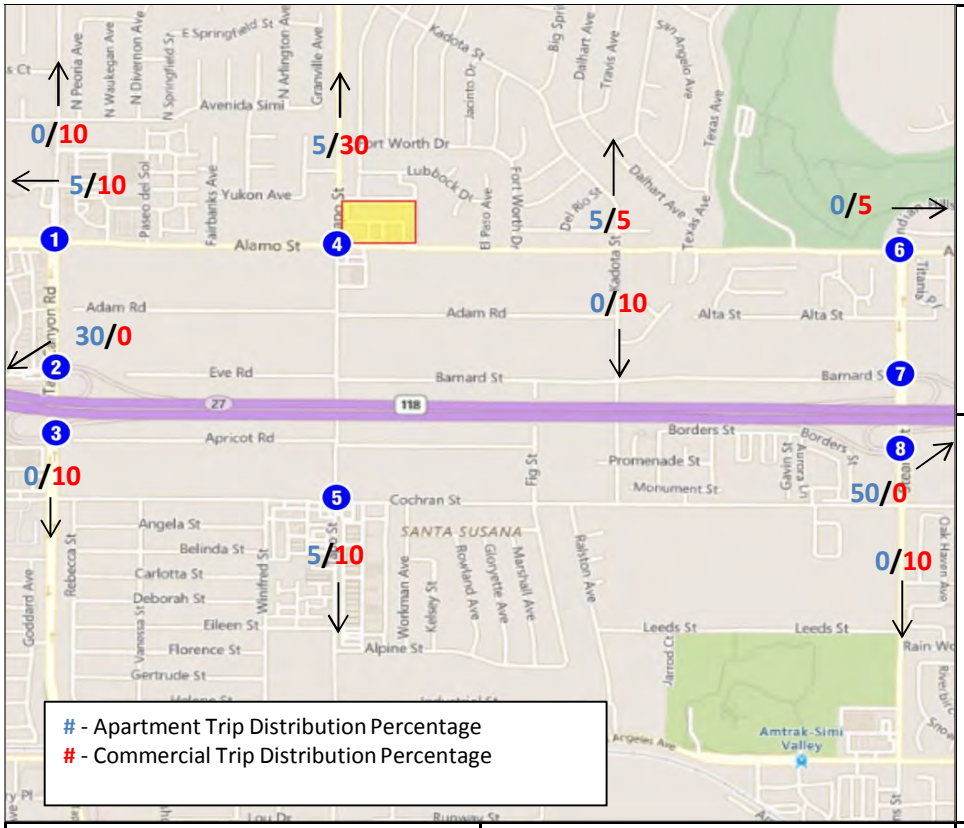

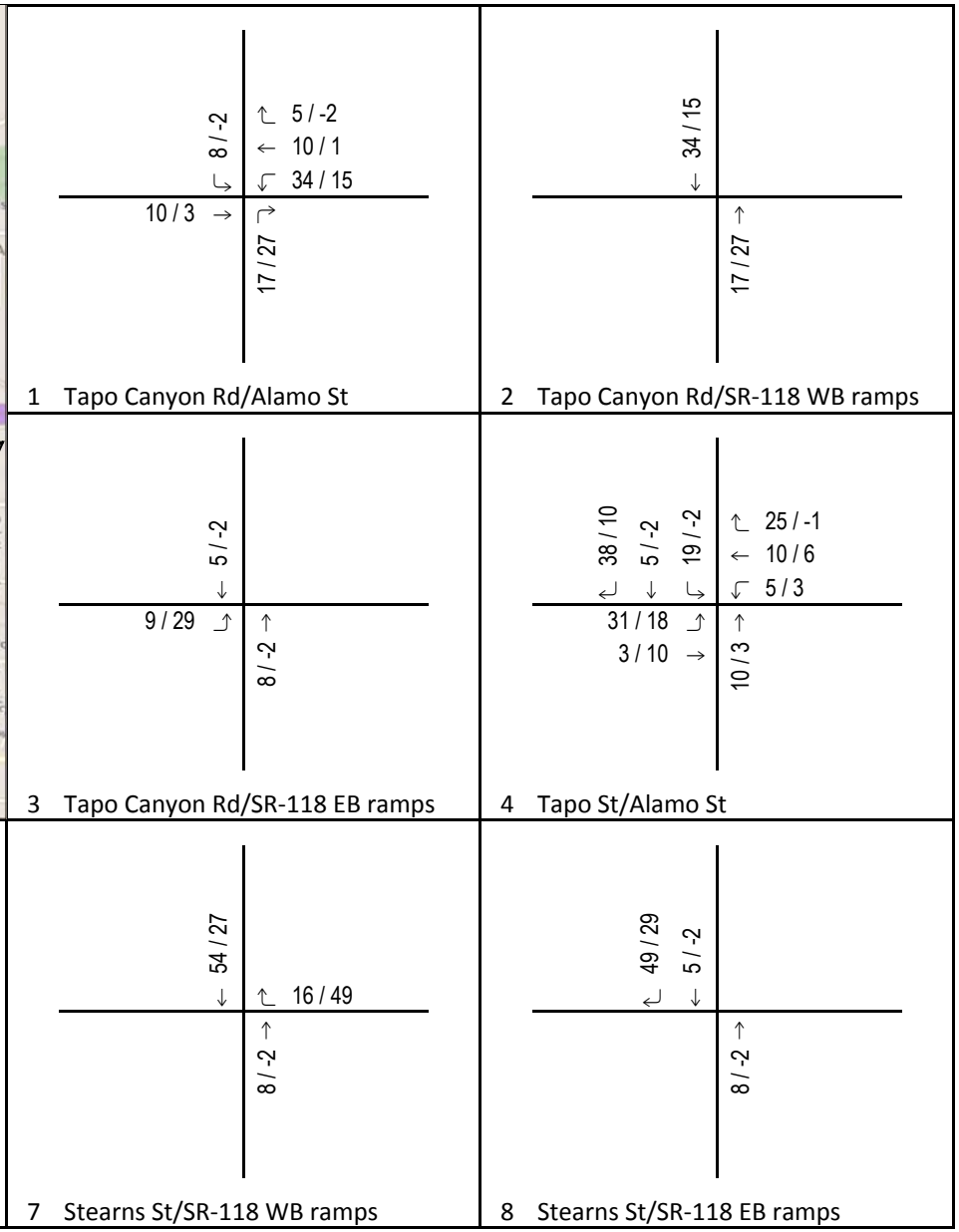

LSA

FIGURE 5

LEGEND
XXX / YYY AM / PM Volume

Alamo Street Mixed Use
Project Trip Distribution and Assignment

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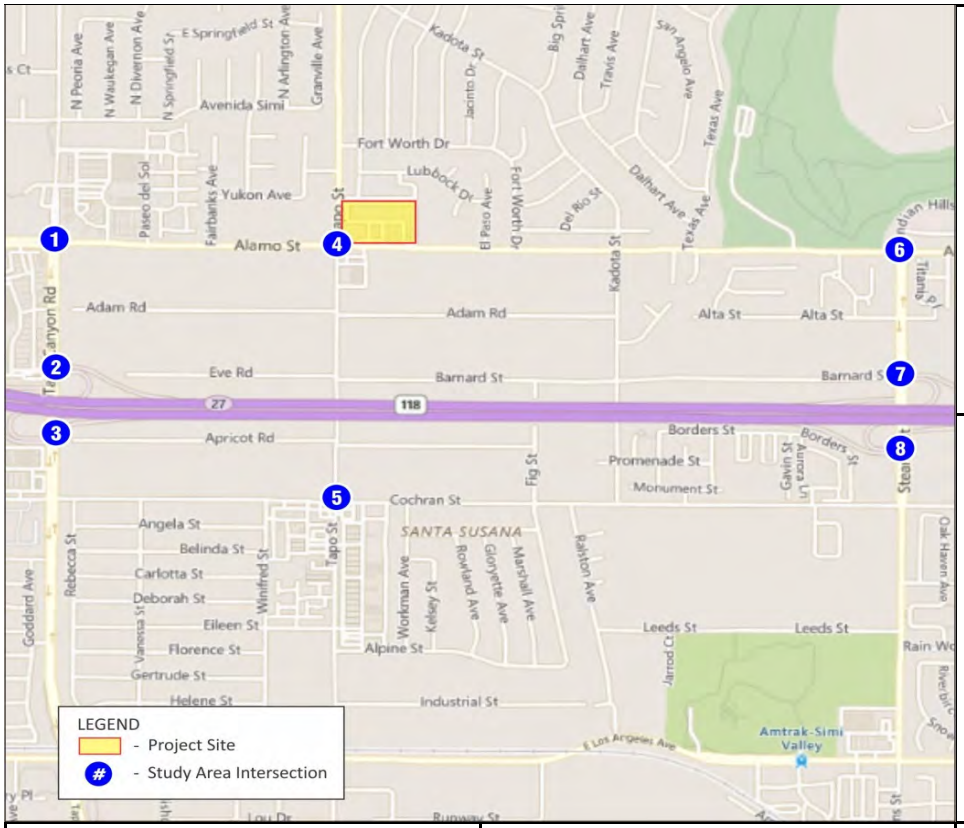


1 Tapo Canyon Rd/Alamo St

144 / 158 ↱	149 / 131 ↰	52 / 64 ↱
268 / 457 →	537 / 385 ↓	484 / 347 ←
205 / 197 ↳	79 / 97 ↳	409 / 258 ↰
231 / 276 ↰		
428 / 562 ↑		
188 / 361 ↱		

2 Tapo Canyon Rd/SR-118 WB ramps

7 / 27 ↱	14 / 19 ↰	295 / 457 ↱
96 / 217 ↳	1075 / 925 ↓	47 / 91 ←
		588 / 620 ↰
57 / 144 ↰		
602 / 788 ↑		
323 / 325 ↱		

3 Tapo Canyon Rd/SR-118 EB ramps

343 / 428 ↱	385 / 304 ↰	45 / 40 ↱
4 / 2 →	873 / 983 ↓	
322 / 264 ↳	7 / 8 ↳	
1180 / 1305 ↑		
35 / 28 ↱		

4 Tapo St/Alamo St

146 / 186 ↱	328 / 137 ↰	210 / 85 ↱
241 / 467 →	364 / 167 ↓	417 / 311 ←
122 / 178 ↳	231 / 73 ↳	81 / 57 ↰
116 / 179 ↰		
308 / 223 ↑		
42 / 85 ↱		

5 Tapo St/Cochran St

170 / 135 ↱	193 / 115 ↰	129 / 76 ↱
337 / 471 →	371 / 306 ↓	336 / 320 ←
112 / 184 ↳	152 / 90 ↳	133 / 119 ↰
76 / 217 ↰		
289 / 363 ↑		
82 / 155 ↱		

6 Stearns St/Alamo St

14 / 39 ↱	38 / 28 ↰	1 / 2 ↱
282 / 222 →	46 / 25 ↓	316 / 157 ←
569 / 349 ↳	1 / 1 ↳	56 / 26 ↰
407 / 431 ↰		
16 / 43 ↑		
31 / 73 ↱		

7 Stearns St/SR-118 WB ramps

9 / 11 ↱	6 / 12 ↰	173 / 287 ↱
87 / 56 ↳	587 / 370 ↓	81 / 113 ←
		278 / 391 ↰
26 / 24 ↰		
288 / 356 ↑		
335 / 222 ↱		

8 Stearns St/SR-118 EB ramps

43 / 131 ↱	442 / 191 ↰	20 / 34 ↱
19 / 41 →	494 / 595 ↓	1 / 1 ←
260 / 315 ↳	29 / 53 ↳	4 / 7 ↰
964 / 768 ↑		
4 / 7 ↱		

FIGURE 6

LSA

LEGEND
XXX / YYY AM / PM Volume

Alamo Street Mixed Use
Existing Plus Project Traffic Volumes

P:\AMG1801\excel\Fig-6-Existing Plus Project Traffic Volumes.xlsx (4/5/2018)

The City's Traffic Engineer provided the *Simi Valley Transportation Model and LOS Analysis Update* (Iteris, December 1, 2017) for future (2030) with project scenario volumes and geometrics, which is provided as Appendix B. The *Simi Valley Transportation Model and LOS Analysis Update* forecast provides year 2030 forecasts from the Simi Valley Transportation Analysis Model (SVTAM), which was updated for the City's latest General Plan update. Therefore, this SVTAM 2030 forecast represents the buildout of the City's General Plan land uses. The project site is represented in the General Plan by a built-out version of the Bellwood Shopping Center. As the proposed 278 apartments and 8,100 sf of commercial use would generate fewer trips than a built-out and fully occupied Bellwood Shopping Center, this SVTAM year 2030 forecast includes the traffic generated by the 278 apartments, 8,100 sf of commercial use, and more. In accordance with the City's guidelines, the traffic volumes for the future (2030) without project scenario are calculated by subtracting the project trips from the future (2030) with project volumes. Figure 7 presents the peak-hour turn-movement volumes for the future (2030) without scenario and Figure 8 presents the volumes for the future (2030) with Project scenario. Figure 9 illustrates the future (2030) geometric changes.

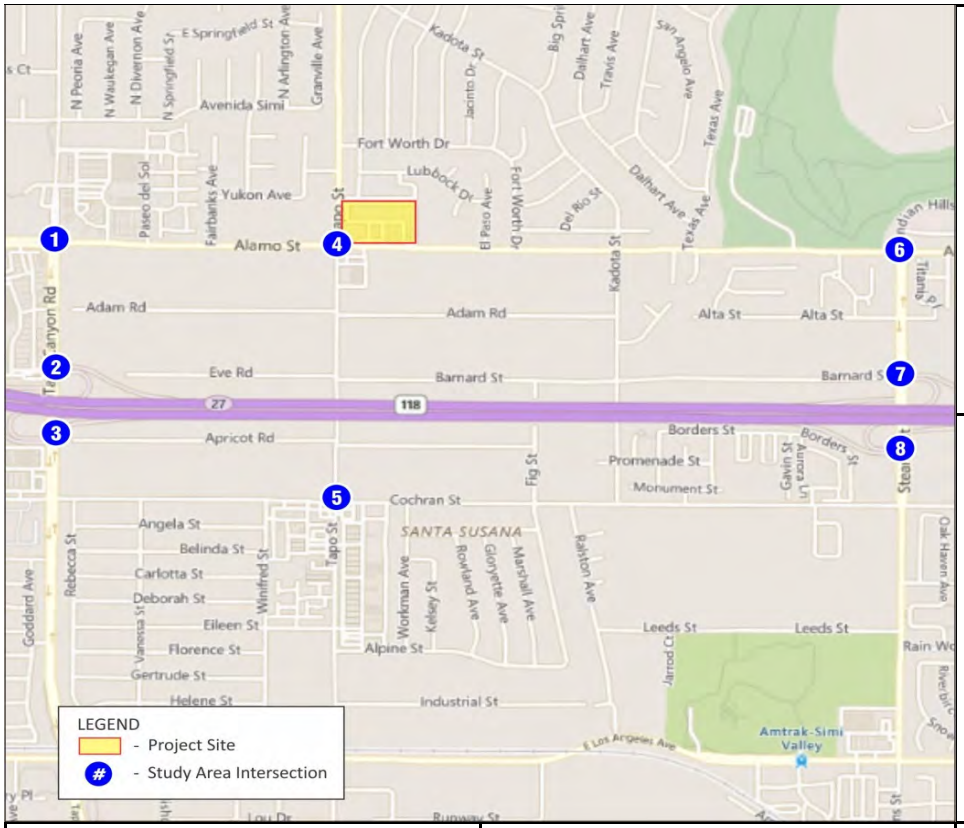
METHODOLOGY

According to the City's guidelines, study area intersections will be analyzed using the intersection capacity utilization (ICU) methodology. This methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU.

The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. Table B presents LOS criteria for signalized intersections using the ICU methodology.

Table B: Level of Service Criteria for Signalized Intersections

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. This level represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.
F	This level describes forced-flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.



1 Tapo Canyon Rd/Alamo St

79 / 229 ↱	↰ 153 / 206	↑ 235 / 639	↱ 107 / 374
250 / 504 →		
315 / 260 ↳		
↲ 106 / 171	↓ 543 / 524	↳ 39 / 164
↰ 58 / 121	← 305 / 470	↳ 283 / 250

2 Tapo Canyon Rd/SR-118 WB ramps

20 / 22 ↱	↰ 87 / 84	↑ 594 / 852	↱ 509 / 361
119 / 181 ↳		
↲ 602 / 14	↓ 825 / 718	
↰ 378 / 410	← 53 / 95	↳ 672 / 474

3 Tapo Canyon Rd/SR-118 EB ramps

336 / 544 ↱	↑ 1323 / 1767	↱ 33 / 42
7 / 4 →		
360 / 489 ↳		
↲ 590 / 574	↓ 960 / 1167	↳ 8 / 4
↰ 9 / 34		

4 Tapo St/Alamo St

78 / 144 ↱	↰ 121 / 191	↑ 348 / 288	↱ 43 / 120
311 / 623 →		
186 / 209 ↳		
↲ 287 / 104	↓ 492 / 203	↳ 294 / 74
↰ 214 / 98	← 449 / 357	↳ 62 / 109

5 Tapo St/Cochran St

213 / 153 ↱	↰ 122 / 262	↑ 273 / 461	↱ 103 / 256
412 / 527 →		
112 / 166 ↳		
↲ 230 / 124	↓ 454 / 322	↳ 235 / 129
↰ 124 / 96	← 358 / 364	↳ 187 / 182

6 Stearns St/Alamo St

39 / 56 ↱	↰ 315 / 390	↑ 40 / 88	↱ 50 / 96
289 / 409 →		
366 / 390 ↳		
↲ 72 / 39	↓ 68 / 38	↳ 10 / 1
↰ 6 / 6	← 477 / 193	↳ 171 / 88

7 Stearns St/SR-118 WB ramps

2 / 6 ↱	↰ 6 / 31	↑ 246 / 448	↱ 412 / 244
41 / 79 ↳		
↲ 14 / 156	↓ 733 / 375	
↰ 192 / 270	← 75 / 143	↳ 286 / 560

8 Stearns St/SR-118 EB ramps

70 / 79 ↱	↑ 1076 / 1081	↱ 9 / 7
6 / 1 →		
228 / 230 ↳		
↲ 324 / 416	↓ 551 / 593	↳ 31 / 27
↰ 23 / 19	← 14 / 11	

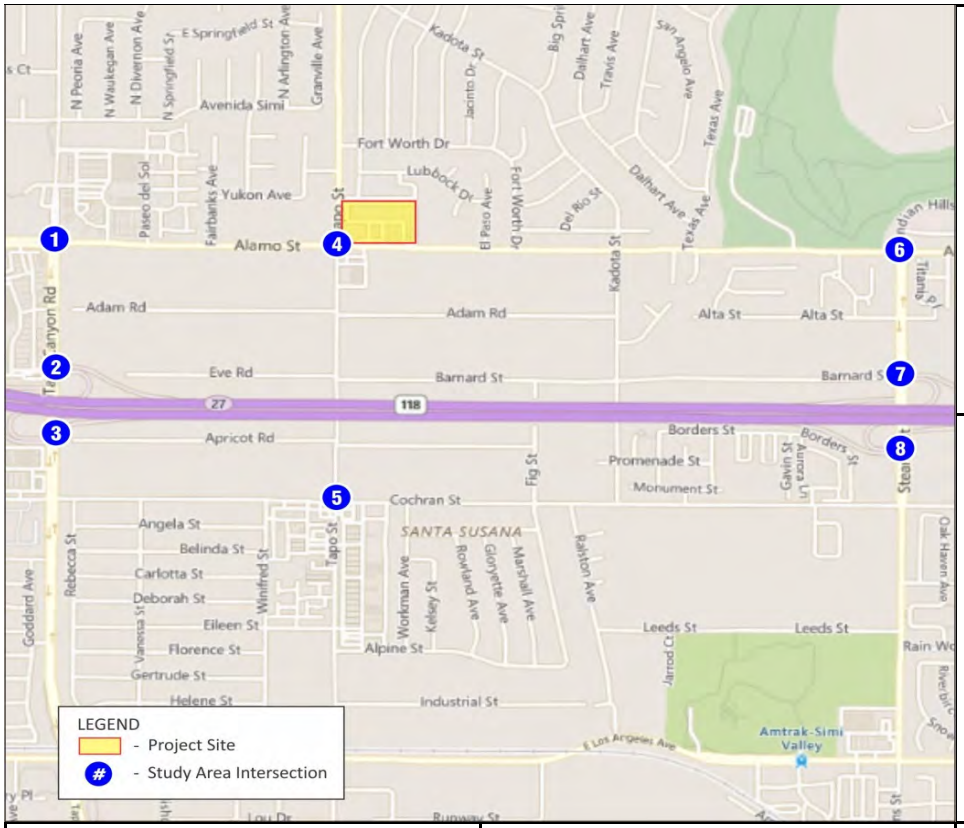
LSA

FIGURE 7

LEGEND
XXX / YYY AM / PM Volume

Alamo Street Mixed Use
Future (2030) Traffic Volumes

P:\AMG1801\excel\Fig-7-Future (2030) Traffic Volumes.xlsx (4/5/2018)



1 Tapo Canyon Rd/Alamo St

79 / 229	260 / 507	315 / 260	153 / 206	235 / 639	124 / 401
↰ ↱	→	↳	↰	↑	↱

106 / 171	543 / 524	47 / 162
↲	↓	↳

63 / 119	↰
315 / 471	←
317 / 265	↰

2 Tapo Canyon Rd/SR-118 WB ramps

20 / 22	119 / 181	87 / 84	611 / 879	509 / 361
↱	↳	↰	↑	↱

602 / 14	↲
859 / 733	↓

378 / 410	↰
53 / 95	←
672 / 474	↰

3 Tapo Canyon Rd/SR-118 EB ramps

345 / 573	7 / 4	360 / 489	1331 / 1765	33 / 42
↱	→	↳	↑	↱

590 / 574	965 / 1165	8 / 4
↲	↓	↳

9 / 34
↰

4 Tapo St/Alamo St

109 / 162	314 / 633	186 / 209	121 / 191	358 / 291	43 / 120
↱	→	↳	↰	↑	↱

325 / 114	497 / 201	313 / 72
↲	↓	↳

239 / 97	↰
459 / 363	←
67 / 112	↰

5 Tapo St/Cochran St

213 / 153	412 / 527	112 / 166	122 / 262	283 / 464	103 / 256
↱	→	↳	↰	↑	↱

230 / 124	464 / 323	235 / 129
↲	↓	↳

124 / 96	↰
358 / 364	←
187 / 182	↰

6 Stearns St/Alamo St

39 / 56	291 / 408	420 / 417	339 / 437	40 / 88	50 / 96
↱	→	↳	↰	↑	↱

72 / 39	68 / 38	10 / 1
↲	↓	↳

6 / 6	↰
481 / 192	←
171 / 88	↰

7 Stearns St/SR-118 WB ramps

2 / 6	41 / 79	6 / 31	254 / 446	412 / 244
↱	↳	↰	↑	↱

14 / 156	787 / 402	
↲	↓	

208 / 319	↰
75 / 143	←
286 / 560	↰

8 Stearns St/SR-118 EB ramps

70 / 79	6 / 1	228 / 230	1084 / 1079	9 / 7
↱	→	↳	↑	↱

373 / 445	556 / 591	31 / 27
↲	↓	↳

23 / 19	↰
14 / 11	↰

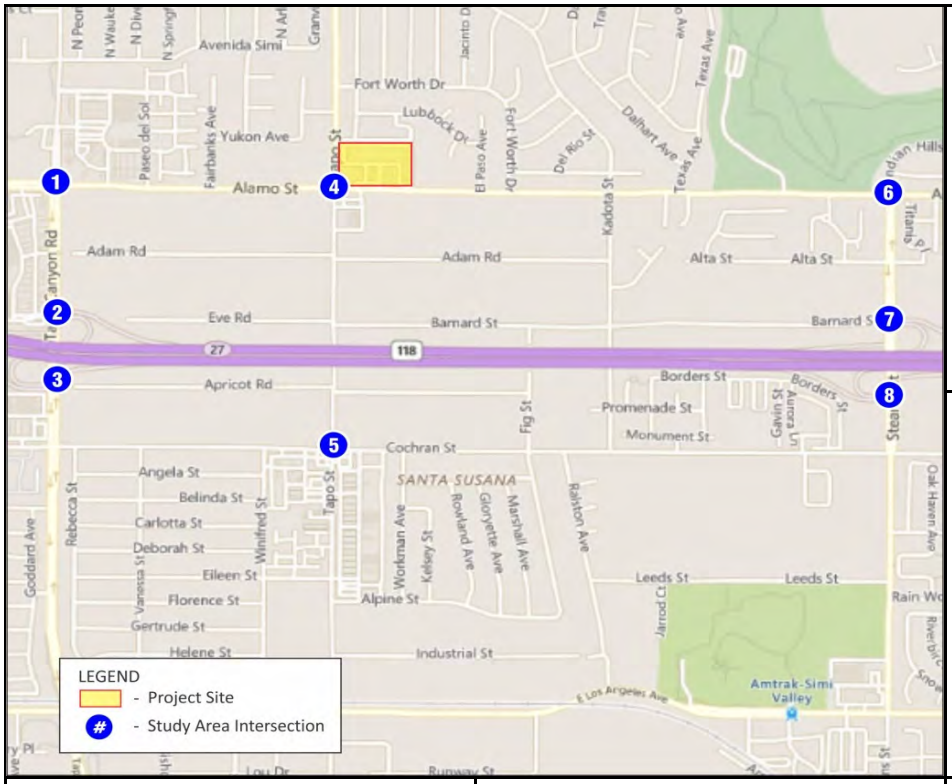
LSA

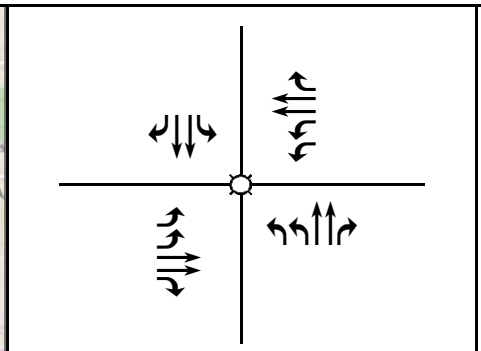
LEGEND
XXX / YYY AM / PM Volume

FIGURE 8

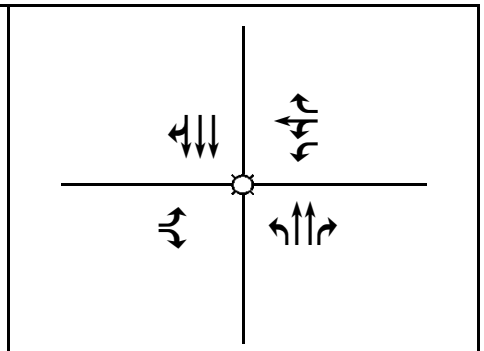
Alamo Street Mixed Use
Future (2030) with Project Traffic Volumes

P:\AMG1801\excel\Fig-8-Future (2030) with Project Traffic Volumes.xlsx (3/30/2018)

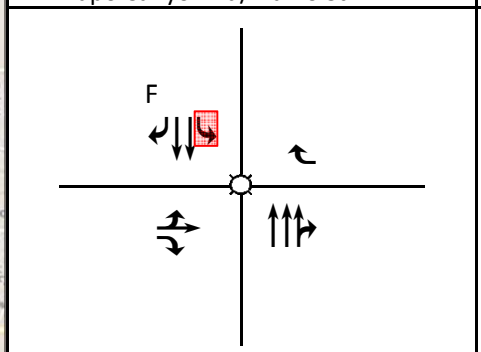




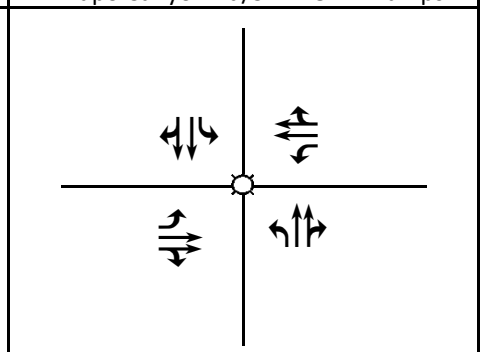
1 Tapo Canyon Rd/Alamo St



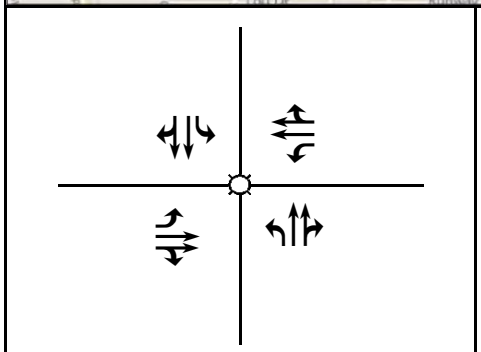
2 Tapo Canyon Rd/SR-118 WB ramps



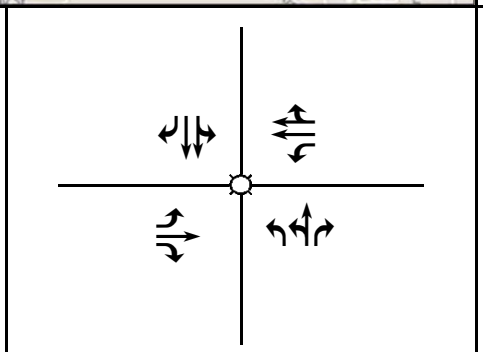
3 Tapo Canyon Rd/SR-118 EB ramps



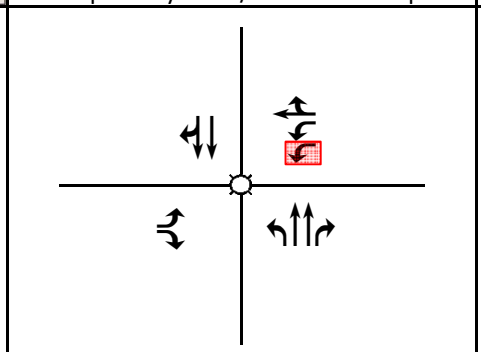
4 Tapo St/Alamo St



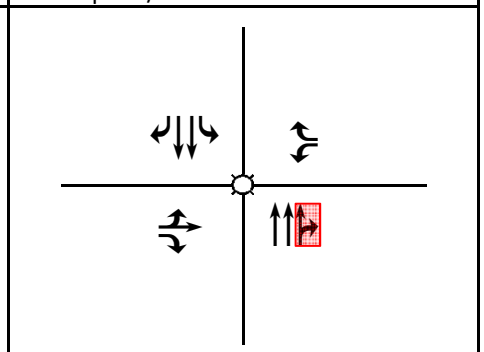
5 Tapo St/Cochran St



6 Stearns St/Alamo St



7 Stearns St/SR-118 WB ramps



8 Stearns St/SR-118 EB ramps

FIGURE 9

LSA

LEGEND

Signal

F Free Right Turn

Indicates a change from the existing geometry

Alamo Street Mixed Use

Future (2030) Intersection Geometrics

P:\AMG1801\excel\Fig-9-Future (2030) Intersection Geometrics.xlsx 5/30/2018

The relationship between LOS and the ICU value (i.e., the v/c ratio) is as follows:

Level of Service	Intersection Capacity Utilization
A	≤ 0.600
B	0.601–0.700
C	0.701–0.800
D	0.801–0.900
E	0.901–1.000
F	> 1.000

The City has established an LOS threshold of C for intersections. Impacts are identified by project traffic causing an intersection to fall below LOS C or an increase of v/c ratio by 0.01 or more if the intersection is operating at LOS D or worse in the baseline condition. CMP intersections are held to a standard of LOS E. This analysis uses the more stringent thresholds set by the City.

The *Traffix* (Version 8.0) computer software was used to determine the LOS based on traffic volume and intersection geometry. All ICU analysis worksheets are provided in Appendix C.

In addition to the ICU methodology of calculating signalized intersection LOS, the *Highway Capacity Manual* (HCM 6th Edition, Transportation Resources Board 2016) methodology was used to determine the LOS at signalized intersections at freeway interchanges. The HCM signalized intersection methodology looks at delay (in seconds per vehicle), as opposed to capacity, as the measure of effectiveness. The resulting delay is expressed in terms of LOS, much like the ICU methodology. The relationship of delay to LOS is illustrated in the following table.

Level of Service	Signalized Intersection Delay (seconds)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Source: *Highway Capacity Manual* (Transportation Research Board 2016).

This study, consistent with City guidelines, evaluates traffic impacts based on ICU methodology. The HCM methodology is another method to evaluate operational conditions at signalized intersections. HCM methodology is also required by the California Department of Transportation (Caltrans) to analyze Caltrans ramp intersections. Acceptable LOS for Caltrans intersections is considered to be LOS D or better. All HCM analysis for this study has been developed using Synchro (Version 10.1) software. All HCM analysis worksheets are provided in Appendix D.

EXISTING CONDITIONS

Table C summarizes the results of the existing a.m. and p.m. peak-hour LOS analysis for the study area intersections and shows that all study area intersections and Caltrans ramp intersections currently operate at an acceptable LOS (i.e., LOS C or better) in the a.m. and p.m. peak hours. With

the addition of the project, all study area intersections and Caltrans ramp intersections are expected to continue to operate at satisfactory LOS during both peak hours.

Based on the City's criteria for determining significant traffic impacts, as described in the Methodology section of this report, the proposed project is not expected to result in a significant impact at any of the study area intersections in the existing condition.

FUTURE (2030) CONDITIONS

Table D summarizes the results of the future (2030) a.m. and p.m. peak-hour LOS analysis for the study area intersections and indicates all study area intersections and Caltrans ramp intersections are forecast to operate at an acceptable LOS (i.e., LOS C or better) in the a.m. and p.m. peak hours. With the addition of the project, all study area intersections and Caltrans ramp intersections are expected to continue to operate at satisfactory LOS during both peak hours.

Based on the City's criteria for determining significant traffic impacts, as described in the Methodology section of this report, the proposed project is not expected to result in a significant impact at any of the study area intersections in the future condition.

SPECIAL ISSUES

Pedestrian Conditions

The intersection of Tapo Street/Alamo Street was observed during the morning and afternoon school commute periods for pedestrian conditions. Valley View Middle School is located approximately 0.60 mile north of Tapo Street/Alamo Street. Santa Susana Elementary School is located approximately 0.40 mile south of Tapo Street/Alamo Street. Striped and signalized crosswalks exist along all four legs of the intersection.

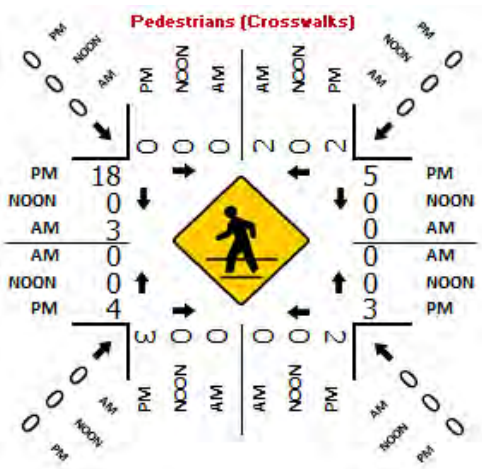


Exhibit A: Pedestrians Crossing at Tapo Street/Alamo Street

During the morning peak hour between 7:15 a.m. and 8:15 a.m., 5 pedestrians crossed the intersection of Tapo Street/Alamo Street. During the afternoon peak hour between 2:15 p.m. and 3:15 p.m., 37 pedestrians crossed the intersection of Tapo Street/Alamo Street. Exhibit A shows which crosswalk each pedestrian used during the peak commute hours.

During the morning peak hour between 7:30 a.m. and 8:30 a.m., 9 pedestrians crossed the intersection of Tapo Street/Adam Road. During the afternoon peak hour between 2:15 p.m. and 3:15 p.m., 15 pedestrians crossed the intersection of Tapo Street/Adam Road. Exhibit B shows which crosswalk each pedestrian used during the peak commute hours. The pedestrian count data can be found in Appendix A.

Table C: Existing Intersection Level of Service Summary

Study Area No.	Intersection	Baseline				With Project				Peak-Hour Δ ICU or Delay	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		ICU/Delay	LOS	ICU/Delay	LOS	ICU/Delay	LOS	ICU/Delay	LOS	AM	PM
1	Tapo Canyon Rd/Alamo St	0.43	A	0.43	A	0.44	A	0.45	A	0.01	0.02
2	Tapo Canyon Rd/SR-118 WB ramps	0.46	A	0.63	B	0.46	A	0.63	B	0.00	0.00
	HCM	*18.2*	*B*	*21.0*	*C*	*18.1*	*B*	*20.9*	*C*	*-0.1*	*-0.1*
3	Tapo Canyon Rd/SR-118 EB ramps	0.45	A	0.52	A	0.46	A	0.54	A	0.01	0.02
	HCM	*15.1*	*B*	*16.4*	*B*	*15.1*	*B*	*16.4*	*B*	*0.0*	*0.0*
4	Tapo St/Alamo St	0.47	A	0.39	A	0.51	A	0.40	A	0.04	0.01
5	Tapo St/Cochran St	0.42	A	0.49	A	0.42	A	0.49	A	0.00	0.00
6	Stearns St/Alamo St	0.45	A	0.33	A	0.49	A	0.36	A	0.04	0.03
7	Stearns St/SR-118 WB ramps	0.39	A	0.37	A	0.39	A	0.37	A	0.00	0.00
	HCM	*12.1*	*B*	*13.6*	*B*	*12.0*	*B*	*13.6*	*B*	*-0.1*	*0.0*
8	Stearns St/SR-118 EB ramps	0.43	A	0.42	A	0.43	A	0.42	A	0.00	0.00
	HCM	*9.5*	*A*	*11.5*	*B*	*9.6*	*A*	*11.5*	*B*	*0.1*	*0.0*

EB = eastbound
HCM = Highway Capacity Manual
ICU = Intersection Capacity Utilization
LOS = level of service
SR-118 = State Route 118
WB = westbound
Δ = change

Table D: Future (2030) Intersection Level of Service Summary

Study Area No.	Intersection	Baseline				With Project				Peak-Hour Δ ICU or Delay	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
		ICU/Delay	LOS	ICU/Delay	LOS	ICU/Delay	LOS	ICU/Delay	LOS	AM	PM
1	Tapo Canyon Rd/Alamo St	0.45	A	0.51	A	0.46	A	0.53	A	0.01	0.02
2	Tapo Canyon Rd/SR-118 WB ramps	0.66	B	0.57	A	0.66	B	0.57	A	0.00	0.00
	HCM	*23.9*	*C*	*18.9*	*B*	*23.9*	*C*	*18.9*	*B*	*0.0*	*0.0*
3	Tapo Canyon Rd/SR-118 EB ramps	0.47	A	0.66	B	0.46	A	0.67	B	(0.01)	0.01
	HCM	*14.5*	*B*	*20.1*	*C*	*14.6*	*B*	*20.5*	*C*	*0.1*	*0.4*
4	Tapo St/Alamo St	0.51	A	0.48	A	0.55	A	0.49	A	0.04	0.01
5	Tapo St/Cochran St	0.51	A	0.56	A	0.51	A	0.56	A	0.00	0.00
6	Stearns St/Alamo St	0.44	A	0.43	A	0.47	A	0.44	A	0.03	0.01
7	Stearns St/SR-118 WB ramps	0.38	A	0.40	A	0.39	A	0.43	A	0.01	0.03
	HCM	*10.9*	*B*	*13.2*	*B*	*10.9*	*B*	*13.5*	*B*	*0.0*	*0.3*
8	Stearns St/SR-118 EB ramps	0.35	A	0.37	A	0.35	A	0.38	A	0.00	0.01
	HCM	*7.6*	*A*	*8.0*	*A*	*7.5*	*A*	*8.0*	*A*	*-0.1*	*0.0*

EB = eastbound
HCM = Highway Capacity Manual
ICU = Intersection Capacity Utilization
LOS = level of service
SR-118 = State Route 118
WB = westbound
Δ = change

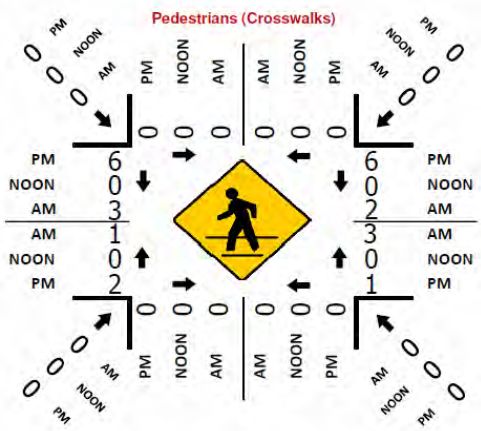


Exhibit B: Pedestrians Crossing at Tapo Street/Adam Road

As shown in Exhibits A and B, the majority of pedestrian crossings are from the north, or from the Valley View Middle School. There are very few pedestrians using the crosswalk during the morning peak hour.

The intersection of Tapo Street/Alamo Street was also analyzed using the ICU methodology for the morning (7:15 a.m. to 8:15 a.m.) and afternoon (2:15 p.m. to 3:15 p.m.) school commute periods. As shown in Table E, the intersection is forecast to operate at an acceptable LOS (i.e., LOS C or better) in the morning and afternoon school peak hours during the existing condition. The project is anticipated to add some pedestrians to the surrounding pedestrian connectivity network. Existing sidewalks and crosswalks can connect additional project related pedestrians to nearby amenities.

Table E: School Peak-Hour Level of Service Summary

Study Area No.	Intersection	Baseline			
		Morning Peak Hour		Afternoon Peak Hour	
		ICU	LOS	ICU	LOS
4	Tapo St/Alamo St	0.47	A	0.47	A

ICU = Intersection Capacity Utilization
LOS = level of service

Access Analysis

As noted above, access to the proposed project will be provided via three driveways: a full-access driveway and a RIRO driveway adjacent to the commercial use and the western residential gate along Tapo Street, and a full-access driveway with direct access to the eastern residential gate along Alamo Street. The project will remove the other two existing driveways on Alamo Street. Parking for the commercial use will be located around the commercial building. Residents will park within the gated portion of the parking structure. Guest parking is located within the ungated portion of the parking structure located near the leasing office.

In March 2017, LSA submitted the Alamo Street Mixed Use Access Analysis to the City, which is included as Appendix E. The 2017 Access Analysis assessed inbound queue lengths, gate stacking distances, and sight distance for each of the proposed driveways. Based on the new project description and a more accurate estimate of the Bellwood Shopping Center trip generation, an update has been provided below.

Driveway Queuing Analysis

In order to ensure that the three project driveways would not present any queuing impacts, *SimTraffic* was used to create a queuing simulation for the project site. *SimTraffic* is a microsimulation tool that assesses roadway segments and intersections based on operational data

and geometric specificities unique to the facility. *SimTraffic* can provide an extensive look at traffic conditions such as queuing in individual lanes of an intersection and the effect adjacent intersections have on each other by simulating discrete vehicle behavior. It should be noted that the project driveways exist in the present setting and will stay in the same locations. The new design will eliminate the westerly and middle driveways on Alamo Street, resulting in all Alamo Street project traffic using the easterly driveway.

Figure 10 shows the queuing lengths at the three project driveways. Table F presents a summary of the *SimTraffic* queuing results. All driveway queuing worksheets are included as Appendix F. Ninety-fifth (95th) percentile queues reached approximately three vehicles (22 feet per vehicle) at the southbound left-turn movement and approximately two vehicles at the northbound right-turn movement at Tapo Street/Northern Driveway. As in the existing condition, vehicles will be able to pass these turning project vehicles by using the outer southbound through lane or inner northbound through lane. A 95th percentile queue of approximately one vehicle was observed at the northbound right-turn movement at Tapo Street/Southern RIRO Driveway. Similar to the northern driveway, vehicles will be able to pass these turning project vehicles by using the inner northbound through lane. A 95th percentile queue of approximately one vehicle was observed at the eastbound left-turn movement at Project Driveway/Alamo Street. These vehicles will be able to wait at the continuous two-way left-turn lane until they are able to make their turns safely. There will not be any westbound right-turn queue at this driveway.

Table F: Project Driveway Queuing Summary

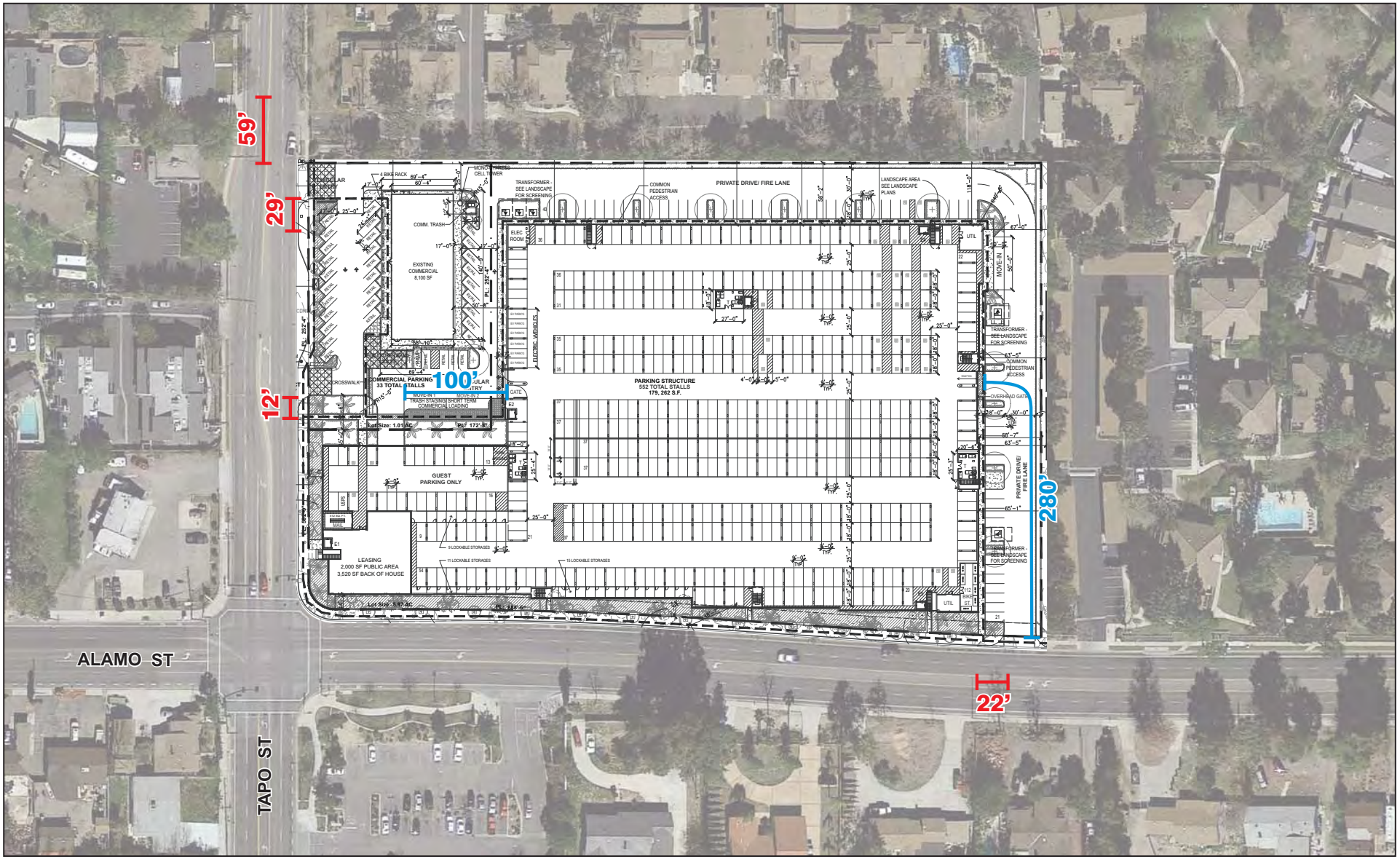
No.	Intersection	Inbound Queue Lengths			
		A.M. Peak Hour		P.M. Peak Hour	
		Movement	Queue (feet)	Movement	Queue (feet)
1	Tapo Street/Northern Driveway	SBL	59	SBL	32
		NBR	29	NBR	0
2	Tapo Street/Southern RIRO Driveway	NBR	12	NBR	0
3	Project Driveway/Alamo Street	EBL	9	EBL	22
		WBR	0	WBR	0

Queues are measured by the 95th percentile queue lengths.

EBL = eastbound left
SBL = southbound left
NBR = northbound right
WBR = westbound right
RIRO = Right-in, Right-out

On-Site Circulation Review

The Robert Crommelin methodology was used to ensure that vehicle queuing does not extend onto a City street from the residential garage entry gates. This methodology is described in Robert Crommelin's *Entrance-Exit Design and Control for Major Parking Facilities* (1972). The Crommelin methodology applies a distribution statistical methodology where vehicular reservoir needs (queuing) at a site can be determined for a given traffic volume and the service rate of the proposed gate device. The Crommelin report has service rates for different gates. The traffic intensity is determined based on the volume of inbound traffic and the design capacities (i.e., service rates).



LSA

LEGEND

xx' - Queue Lengths

xx' - Gate Stacking Distances

N

0 65 130

FEET

SOURCE: Architects Orange

FIGURE 10

Alamo Street Mixed Use

Queue Lengths and Gate Stacking Distances

I:\AMG1801\G\Queues&Gate Stacking.cdr (4/6/2018)

Traffic intensity is the ratio between the average arrival rate (peak-hour volume) and the gate service rate, which results in the length (22 feet per vehicle) necessary for adequate reservoir space. Table G details the Crommelin methodology analysis for the inbound vehicles at the gated entry. The Crommelin Report is included in Appendix G.

Table G: Crommelin Methodology Gate-Stacking Analysis

Table G.1: Project Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Apartment	31	97	128	97	58	155

[1] Trips based on the Institute of Transportation Engineers (ITE) *Trip Generation* manual, 10th Edition (2017).

Table G.2: Peak-Hour Service Rate (Service Rates per Lane[1])

Average Headway (seconds/vehicle)	Design Capacity (vehicles/hour)	Maximum Capacity (vehicles/hour)
8.9	340	425

[1] Obtained from Robert Crommelin's *Entrance-Exit Design and Control for Major Parking Facilities* (1972).

Table G.3: Peak-Hour Stacking Analysis

Inbound Trip Type	Service Rate[1]	Arrival Rate[2]		Traffic Intensity[3]		Reservoir Required (feet)[4]	
		AM	PM	AM	PM	Average	95th %
Apartment	340	31	97	0.09	0.29	**0**	**22**

[1] The Service Rate is the Design Capacity.
[2] Arrival Rate is the peak-hour inbound volume.
[3] Traffic Intensity is the Arrival Rate ÷ Service Rate per the "Reservoir Needs vs. Traffic Intensity" table.
[4] Number of feet indicated in the "Reservoir Needs vs. Traffic Intensity" table (based on the highest of the AM and PM Traffic Intensity). 22 feet equates to 1 vehicle. "Average" is the reservoir required for the average queue. "95th %" is the reservoir required so a queue does not exceed the reservoir 5 times in 100.

The "coded card operated gate" control at 340 vehicles per hour was utilized for project vehicles in the Crommelin methodology. This is a conservative rate, because the proposed system would use a gate opener or transponder and would not require a vehicle to stop and insert a card, thereby resulting in a faster rate. For the sake of a conservative analysis, 100 percent of inbound apartment trips were applied to both gated entries. It should be noted that gated access is only provided for residents and guest parking will be available outside of the gated parking structure.

Based on this analysis, the gates for project vehicles require a reservoir of 22 feet (i.e., one vehicle). As previously referenced Figure 10 shows, approximately 100 feet will be provided between the inbound western gate and the guest parking intersection and approximately 280 feet will be provided between the inbound eastern gate and Alamo Street. Therefore, the gated entries would have sufficient length for inbound project vehicles.

Sight Distance Analysis

A sight distance analysis was conducted along Tapo Street and Alamo Street at the three proposed project driveways and two internal parking structure access points to ensure driver visibility and safety. In the project vicinity, the Tapo Street and Alamo Street speed limits are 45 mph. According

to Table 201.1 of the *Highway Design Manual* (HDM), the stopping sight distance for a roadway with the speed limit of 45 mph is 360 feet. For the internal parking structure access points, a speed limit of 15 mph was used, which requires a stopping sight distance of 100 feet.

Figure 11 illustrates the sight distances along Tapo Street, Alamo Street, and the project site drive aisles. The sight distance triangles shown in previously referenced Figure 5 are measured 15 feet back from the edge of traveled way. No sight distance obstructions are located at the proposed project driveways.

Therefore, the project driveways and project drive aisles would meet the minimum sight distance requirements specified in the HDM.

Signal Warrant Analysis

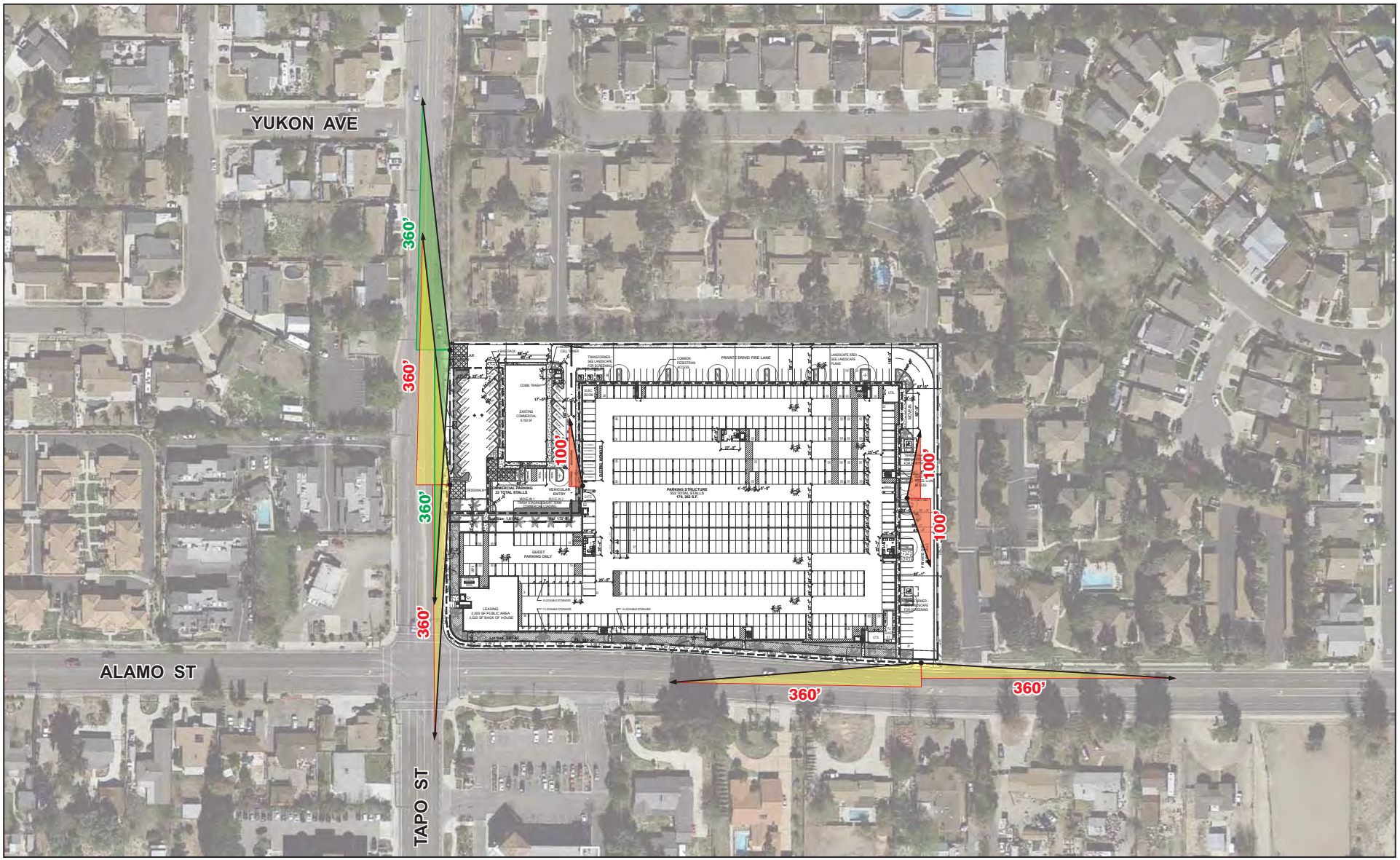
A signal warrant analysis was prepared to determine whether installation of a traffic signal is justified at the intersection of Tapo Street and Adam Road. The intersection of Tapo Street and Adam Road is of special concern to City Staff and LSA due to its location between the project site and schools further south on Tapo Street. Therefore, a signal warrant analysis was conducted in consideration of potential safety concerns at this location.

The peak-hour signal warrant analysis (Traffic Signal Warrant 3) and the peak-hour pedestrian signal warrant analysis (Traffic Signal Warrant 4) were conducted based on the *California Manual on Uniform Traffic Control Devices* (CAMUTCD), 2014 Edition. The peak-hour signal warrant analysis is summarized in Table H. The peak-hour pedestrian signal warrant analysis is summarized in Table I. The CAMUTCD traffic signal warrant worksheets are provided in Appendix H.

Based on the results of this analysis, a signal is not warranted at Tapo Street/Adam Road for the existing and existing plus project conditions for either traffic signal warrant analysis.

Protected Left-Turn Analysis

The intersection of Tapo Street/Alamo Street currently operates with northbound-southbound protected-permitted left turns and eastbound-westbound permitted left turns. LSA conducted an analysis to determine whether eastbound-westbound protected left-turn phasing is warranted due to the concerns of eastbound and westbound left-turn queuing. Guidelines from Table 118 of the *Signalized Intersections: Informational Guide* (Federal Highway Administration [FHWA], August 2004) for the implementation of left-turn treatments were used.



LSA

FIGURE 11

N

0 100 200
FEET

SOURCE: Architects Orange

Alamo Street Mixed Use

Sight Distance Analysis

I:\AMG1801\G\Sight Distances.cdr (4/6/2018)

Table H: Peak-Hour Traffic Signal Warrant Analysis(Tapo Street/Adam Road)

Street Classification	Street Name	Approach Movement	No Project		Plus Project	
			AM	PM	AM	PM
Minor (1 Lane)	Adam Road	EBL	24	19	24	19
		EBT	0	1	0	1
		EBR	34	15	34	15
		Total	**58**	**35**	**58**	**35**
Major (2 Lanes)	Tapo Street	NBL	10	18	10	18
		NBT	398	461	408	464
		NBR	13	16	13	16
		SBL	8	10	8	10
		SBT	549	490	554	488
		SBR	11	14	11	14
		Total	**989**	**1,009**	**1,004**	**1,010**
Signal Warranted?[1]			**No**	**No**	**No**	**No**

[1] A signal is warranted when the highest approach volume of the Minor Street (Adam Road) exceeds 75 peak-hour vehicles and the total approach volume of the Major Street (Tapo Street) exceeds 1,300 peak-hour vehicles.

EBL = eastbound left, EBT = eastbound through, EBR = eastbound right, NBL = northbound left, NBT = northbound through, NBR = northbound right, SBL = southbound left, SBT = southbound through, SBR = southbound right.

Table I: Peak-Hour Pedestrian Traffic Signal Warrant Analysis (Tapo Street/Adam Road)

Classification	Approach Movement	No Project		Plus Project	
		AM	PM	AM	PM
Pedestrians	North Leg	0	0	0	0
	South Leg	0	0	0	0
	Total	**0**	**0**	**0**	**0**
Major Street: Tapo Street	NBL	10	18	10	18
	NBT	398	461	408	464
	NBR	13	16	13	16
	SBL	8	10	8	10
	SBT	549	490	554	488
	SBR	11	14	11	14
	Total	**989**	**1,009**	**1,004**	**1,010**
Signal Warranted?[1]		**No**	**No**	**No**	**No**

[1] A signal is warranted when the total of all pedestrians crossing the major street (Tapo Street) exceeds 93 pedestrians per hour and the total approach volume of the Major Street (Tapo Street) exceeds 1,200 peak-hour vehicles.

NBL = northbound left, NBT = northbound through, NBR = northbound right, SBL = southbound left, SBT = southbound through, SBR = southbound right.

Table 118. Guidelines for use of left-turn phasing.

Left-turn phasing (protected-permissive, permissive-protected, or protected-only) should be considered if any one of the following criteria is satisfied:

1. *A minimum of 2 left-turning vehicles per cycle and the product of opposing and left-turn hourly volumes exceeds the appropriate following value:*
    a. *Random arrivals (no other traffic signals within 0.8 km (0.5 mi))*
       One opposing lane: 45,000 Two opposing lanes: 90,000
    b. *Platoon arrivals (other traffic signals within 0.8 km (0.5 mi))*
       One opposing lane: 50,000 Two opposing lanes: 100,000
2. *The left-turning movement crosses 3 or more lanes of opposing through traffic.*
3. *The posted speed of opposing traffic exceeds 70 km/h (45 mph).*
4. *Recent crash history for a 12-month period indicates 5 or more left-turn collisions that could be prevented by the installation of left-turn signals.*
5. *Sight distances to oncoming traffic are less than the minimum distances in table 119.*
6. *The intersection has unusual geometric configurations, such as five legs, when an analysis indicates that left-turn or other special traffic signal phases would be appropriate to provide positive direction to the motorist.*
7. *An opposing left-turn approach has a left-turn signal or meets one or more of the criteria in this table.*
8. *An engineering study indicates a need for left-turn signals. Items that may be considered include, but are not necessarily limited to, pedestrian volumes, traffic signal progression, freeway interchange design, maneuverability of particular classes of vehicles, and operational requirements unique to preemption systems.*

None of the criteria listed in Table 118 are satisfied at this intersection for any of the analysis scenarios for which traffic was forecast. Therefore, eastbound-westbound protected left-turn phasing is not warranted at Tapo Street/Alamo Street.

Collision History

As requested by the City Traffic Engineer, LSA collected recent collision history data for the area immediately surrounding the project site. In preparation of this report, data were queried from the Statewide Integrated Traffic Records System (SWITRS), an online database of all accidents reported in California. According to SWITRS data, 14 collisions occurred on Tapo Street between Kadota Street and Adam Road from January 2013 to December 2017, the latest five-year period for which complete collision records were available. Table J summarizes the description of each collision. Figure 12 illustrates the location of the collisions.

Table J: Five-Year (2013–2017) Collisions near Tapo Street/Alamo Street

Date	Collision Type	Injury	Description
May 2013	Bicycle/Vehicle	1 killed	Southbound bicyclist entered traffic and collided with a southbound vehicle turning right
Aug 2013	Head-on	1 injured	Northbound vehicle made a U-turn into southbound vehicle proceeding straight
Sep 2013	Vehicle/Pedestrian	1 injured	Westbound vehicle made a right turn and collided with a pedestrian

Table J: Five-Year (2013–2017) Collisions near Tapo Street/Alamo Street

Date	Collision Type	Injury	Description
Dec 2013	Broadside	1 injured	Eastbound vehicle made a left turn and broadsided a westbound vehicle proceeding straight
Apr 2014	Hit Object	1 injured	Eastbound vehicle ran off road at an unsafe speed and collided with a parked vehicle
Oct 2014	Vehicle/Pedestrian	1 injured	Westbound vehicle made an unsafe turning movement and collided with a pedestrian
Nov 2014	Head-on	2 injured	Northbound vehicle made a left turn and collided head-on with a southbound vehicle proceeding straight
Apr 2015	Rear End	1 injured	Eastbound vehicle proceeded straight and rear-ended a stopped vehicle
Aug 2015	Broadside	1 injured	Driver under the influence of alcohol/drugs entered traffic eastbound and broadsided a westbound vehicle proceeding straight
Aug 2016	Bicycle/Fixed Object	1 injured	Bicyclist collided with a fixed object
Feb 2017	Rear End	1 injured	Southbound vehicle made an unsafe turning movement and collided with two parked vehicles
May 2017	Broadside	1 injured	Eastbound vehicle made a left turn and broadsided a stopped vehicle
Sep 2017	Broadside	2 injured	Westbound vehicle made a left turn into southbound vehicle proceeding straight
Dec 2017	Head-on	1 injured	Northbound vehicle made a left turn and collided head-on with a southbound vehicle proceeding straight

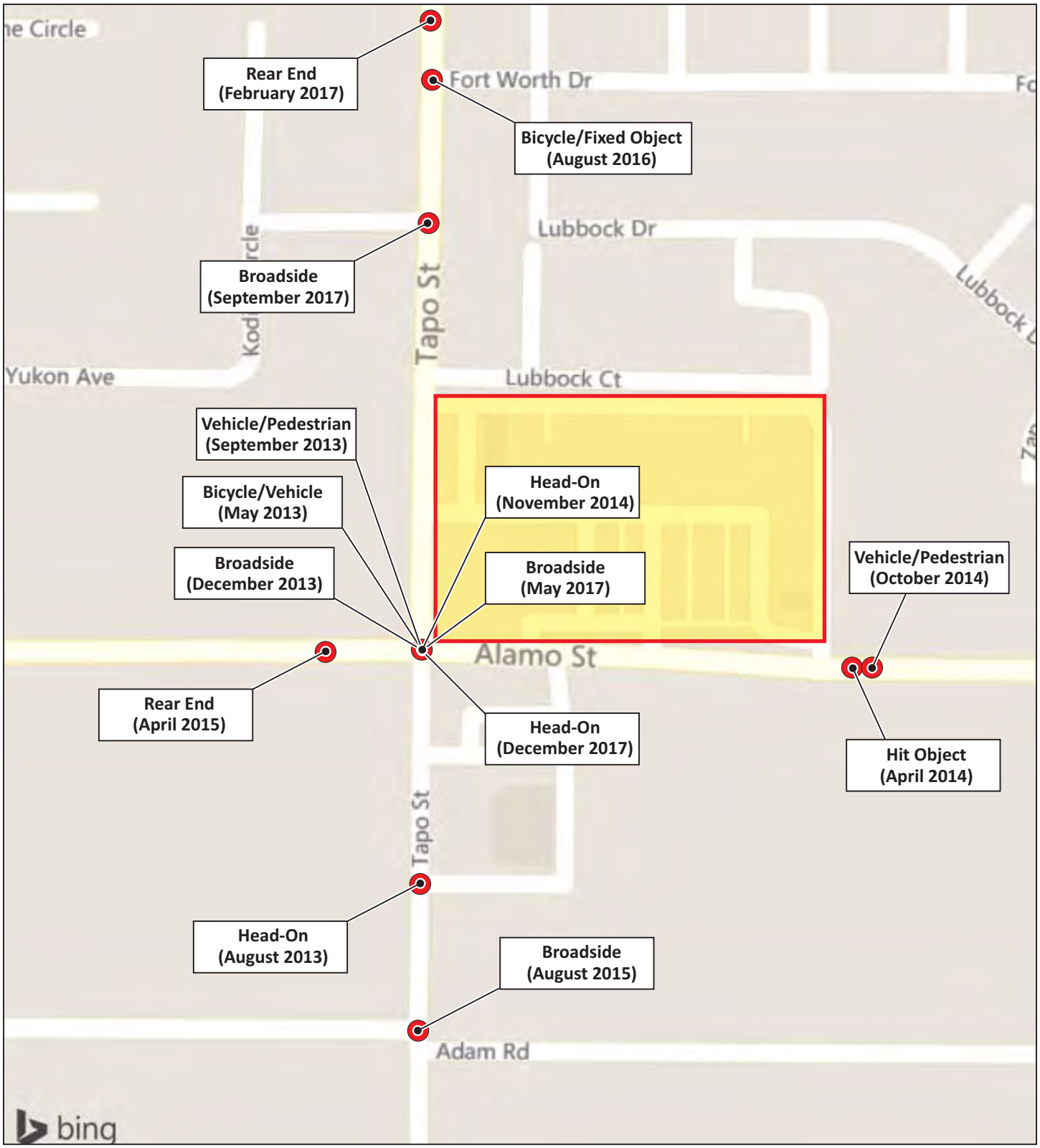
Source: California Highway Patrol. Statewide Integrated Traffic Records System. Records for Simi Valley Police Department for the City of Simi Valley from January 1, 2013, to December 31, 2017. Website: http://iswitrs.chp.ca.gov, accessed on March 30, 2018.

As seen in Table J and Figure 12, the majority of these collisions occurred between two or more vehicles at each of the intersections. There are two collisions that occurred between one vehicle and a pedestrian in which the vehicle was traveling westbound and made an unsafe turning movement and ignored the pedestrian right of way. Neither collision was fatal. Two collisions involved bicyclists; one in which a bicyclist entered traffic illegally, resulting in a fatality, and the other involved a fixed object and resulted in an injury.

Based on the collision history, there is not a consistent pattern of collisions caused by the roadway or intersection geometry nor does the number of accidents meet accepted state safety improvement thresholds. Therefore, no physical changes to the roadway or intersection geometry have been recommended as a result of this collision history analysis.

CONCLUSION

Based on the results of this Traffic Impact Report, the proposed Alamo Mixed Use Project can be implemented without significantly affecting the local circulation system. According to City thresholds, all study area intersections and Caltrans ramp intersections are anticipated to operate at a satisfactory LOS in both a.m. and p.m. peak hours with the addition of project traffic under existing and future (2030) conditions.



LSA

FIGURE 12

LEGEND

- Project Site

N

0 125 250

FEET

SOURCE: Bing Maps

Alamo Street Mixed Use

5-Year (2013 - 2017) Collision Data

I:\AMG1801\G\Collision Data.cdr (4/2/2018)

Since all intersections operate at satisfactory LOS according to the City's more stringent standards, it can be concluded that this project is consistent with CMP standards. LSA conducted a series of analyses on the adjacent intersections to determine whether improvements were warranted. A peak-hour traffic signal warrant analysis and a peak-hour pedestrian traffic signal warrant analysis were conducted for the unsignalized intersection of Tapo Street/Adam Road, which concluded no signal was warranted. A protected left-turn phasing analysis was conducted for the signalized intersection of Tapo Street/Alamo Street, which concluded protected left-turn phasing was not warranted. Five-year accident data were reviewed near the intersection of Tapo Street/Alamo Street and indicated that the overarching issue with these collisions is driver error. Physical changes to the roadway or intersection geometry are therefore not recommended based on this collision history near the project site.

APPENDIX A

EXISTING TRAFFIC VOLUME DATA

Location: Tapo Canyon Rd & Alamo St
City: Simi Valley
Control: Signalized

Project ID: 18-05149-001
Date: 3/6/2018

Total

NS/EW Streets:	Tapo Canyon Rd				Tapo Canyon Rd				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	1	2	1	0	2	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	28	44	29	0	6	92	10	0	8	32	43	0	77	47	4	0	420
7:15 AM	43	66	42	0	11	110	30	0	26	56	52	0	85	79	9	0	609
7:30 AM	42	144	56	0	16	161	40	0	50	80	66	0	90	159	9	0	913
7:45 AM	80	134	41	0	19	133	42	0	36	58	31	0	119	120	19	0	832
8:00 AM	66	84	32	0	25	133	37	0	32	64	56	0	81	116	10	0	736
8:15 AM	49	72	53	0	14	96	40	0	16	51	56	0	44	96	8	0	595
8:30 AM	44	51	36	0	12	67	21	0	10	49	36	0	69	131	12	0	538
8:45 AM	31	66	41	0	13	82	18	0	17	65	49	0	86	170	19	0	657
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	383	661	330	0	116	874	238	0	195	455	389	0	651	918	90	0	5300
APPROACH %'s :	27.87%	48.11%	24.02%	0.00%	9.45%	71.17%	19.38%	0.00%	18.77%	43.79%	37.44%	0.00%	39.24%	55.33%	5.42%	0.00%	
PEAK HR :	**07:15 AM - 08:15 AM**																TOTAL
PEAK HR VOL :	231	428	171	0	71	537	149	0	144	258	205	0	375	474	47	0	3090
PEAK HR FACTOR :	0.722	0.743	0.763	0.000	0.710	0.834	0.887	0.000	0.720	0.806	0.777	0.000	0.788	0.745	0.618	0.000	0.846
	0.814				0.872				0.774				0.868				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	1	2	1	0	2	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	71	119	66	0	20	92	26	0	29	100	49	0	66	91	17	0	746
4:15 PM	79	131	56	0	25	108	34	0	27	108	39	0	53	78	19	0	757
4:30 PM	66	126	64	0	18	106	32	0	40	111	61	0	69	71	16	0	780
4:45 PM	56	123	77	0	17	103	33	0	51	118	56	0	60	97	12	0	803
5:00 PM	68	129	85	0	17	94	34	0	37	134	56	0	51	87	15	0	807
5:15 PM	55	132	75	0	30	81	30	0	53	110	53	0	68	79	17	0	783
5:30 PM	78	135	80	0	26	102	28	0	34	114	49	0	67	86	15	0	814
5:45 PM	75	166	94	0	26	108	39	0	34	96	39	0	57	94	19	0	847
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	548	1061	597	0	179	794	256	0	305	891	402	0	491	683	130	0	6337
APPROACH %'s :	24.84%	48.10%	27.06%	0.00%	14.56%	64.61%	20.83%	0.00%	19.09%	55.76%	25.16%	0.00%	37.65%	52.38%	9.97%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**																TOTAL
PEAK HR VOL :	276	562	334	0	99	385	131	0	158	454	197	0	243	346	66	0	3251
PEAK HR FACTOR :	0.885	0.846	0.888	0.000	0.825	0.891	0.840	0.000	0.745	0.847	0.879	0.000	0.893	0.920	0.868	0.000	0.960
	0.875				0.889				0.891				0.963				

Prepared by National Data & Surveying Services

Tapo Canyon Rd & Alamo St

Peak Hour Turning Movement Count

ID: 18-05149-001
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

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

SOUTHBOUND (Tapo Canyon Rd)

AM	149	537	71	0	619	AM
NOON	0	0	0	0	0	NOON
PM	131	385	99	0	786	PM
	1	2	1	0		

EASTBOUND (Alamo St)

AM	NOON	PM		
854	0	753		
0	0	0	0	
144	0	158	2	
258	0	454	2	
205	0	197	1	
AM	NOON	PM		

WESTBOUND (Alamo St)

	PM	NOON	AM
1	66	0	47
2	346	0	474
2	243	0	375
0	0	0	0
	887	0	500
	PM	NOON	AM

CONTROL

Signalized

	AM	NOON	PM
TEV	3090	0	3251
PHF	0.85		0.96

NORTHBOUND (Tapo Canyon Rd)

	0	2	2	1		
PM	825	0	276	562	334	PM
NOON	0	0	0	0	0	NOON
AM	1117	0	231	428	171	AM

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo Canyon Rd & CA 118 WB ramps
City: Simi Valley
Control: Signalized

Project ID: 18-05149-002
Date: 3/6/2018

Total

NS/EW Streets:	Tapo Canyon Rd					Tapo Canyon Rd					CA 118 WB ramps					CA 118 WB ramps					
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	1	2	1	0	0	0	3	0	0	0	1	0	1	0	0	1.5	0.5	1	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
7:00 AM	12	54	74	2	0	0	225	1	0	120	2	0	23	0	6	89	11	44	0	0	663
7:15 AM	9	134	99	1	0	0	240	2	0	103	2	0	16	0	4	124	13	63	0	0	810
7:30 AM	6	176	81	3	0	0	281	4	0	125	2	0	21	0	7	169	9	65	0	1	950
7:45 AM	22	165	72	1	0	0	272	4	0	124	1	0	27	0	5	161	16	83	0	0	953
8:00 AM	14	110	71	1	0	0	248	4	0	112	2	0	32	0	8	134	9	84	0	1	830
8:15 AM	20	127	64	0	0	0	206	2	0	69	1	0	18	0	6	83	5	49	0	0	650
8:30 AM	22	132	63	2	0	0	188	5	0	94	1	0	22	0	5	51	7	28	0	0	620
8:45 AM	23	164	66	0	0	0	196	4	0	108	1	0	25	0	3	21	3	16	0	0	630
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
TOTAL VOLUMES :	128	1062	590	10	0	0	1856	26	0	855	12	0	184	0	44	832	73	432	0	2	6106
APPROACH %'s :	7.15%	59.33%	32.96%	0.56%	0.00%	0.00%	67.81%	0.95%	0.00%	31.24%	5.00%	0.00%	76.67%	0.00%	18.33%	62.14%	5.45%	32.26%	0.00%	0.15%	
PEAK HR :	07:15 AM - 08:15 AM																				TOTAL
PEAK HR VOL :	51	585	323	6	0	0	1041	14	0	464	7	0	96	0	24	588	47	295	0	2	3543
PEAK HR FACTOR :	0.580	0.831	0.816	0.500	0.000	0.000	0.926	0.875	0.000	0.928	0.875	0.000	0.750	0.000	0.750	0.870	0.734	0.878	0.000	0.500	0.929
			0.907					0.926					0.756					0.896			

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	1	2	1	0	0	0	3	0	0	0	1	0	1	0	0	1.5	0.5	1	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
4:00 PM	31	187	73	0	0	0	206	8	0	97	5	0	37	0	13	139	11	90	0	1	898
4:15 PM	30	160	77	0	0	0	215	2	0	92	9	0	33	0	8	143	25	104	0	0	898
4:30 PM	44	205	94	3	0	0	214	4	0	80	6	0	50	0	13	142	21	100	0	1	977
4:45 PM	31	191	85	0	0	0	227	6	0	86	6	0	60	0	18	162	25	112	0	0	1009
5:00 PM	43	173	90	4	1	0	238	6	0	106	6	0	52	0	14	152	21	109	0	0	1015
5:15 PM	30	200	77	0	0	0	211	2	0	95	9	0	61	0	15	144	23	105	0	0	972
5:30 PM	36	197	73	0	0	0	234	5	0	86	6	0	44	0	16	162	22	131	0	0	1012
5:45 PM	35	213	63	0	0	0	201	3	0	88	6	0	55	0	19	141	20	111	0	1	956
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
TOTAL VOLUMES :	280	1526	632	7	1	0	1746	36	0	730	53	0	392	0	116	1185	168	862	0	3	7737
APPROACH %'s :	11.45%	62.39%	25.84%	0.29%	0.04%	0.00%	69.51%	1.43%	0.00%	29.06%	9.45%	0.00%	69.88%	0.00%	20.68%	53.43%	7.57%	38.86%	0.00%	0.14%	
PEAK HR :	04:45 PM - 05:45 PM																				TOTAL
PEAK HR VOL :	140	761	325	4	1	0	910	19	0	373	27	0	217	0	63	620	91	457	0	0	4008
PEAK HR FACTOR :	0.814	0.951	0.903	0.250	0.250	0.000	0.956	0.792	0.000	0.880	0.750	0.000	0.889	0.000	0.875	0.957	0.910	0.872	0.000	0.000	0.987
			0.990					0.930					0.903					0.927			

Prepared by National Data & Surveying Services

Tapo Canyon Rd & CA 118 WB ramps

Peak Hour Turning Movement Count

ID: 18-05149-002
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Tapo Canyon Rd — SOUTHBOUND

AM	14	1041	0	0	887	AM
NOON	0	0	0	0	0	NOON
PM	19	910	0	0	1245	PM
	0	3	0	0		

CA 118 WB ramps — EASTBOUND

AM	NOON	PM		
112	0	250		
0	0	0	0	
7	0	27	1	
0	0	0	0	
96	0	217	1	
AM	NOON	PM		

CA 118 WB ramps — WESTBOUND

	PM	NOON	AM
1	457	0	295
0.5	91	0	47
1.5	620	0	588
0	0	0	0
	325	0	323
	PM	NOON	AM

Tapo Canyon Rd — NORTHBOUND

PM	1751	4	140	761	325	PM
NOON	0	0	0	0	0	NOON
AM	1731	6	51	585	323	AM
		0	1	2	1	

CONTROL			
Signalized			
TEV	3053	0	3571
	AM	NOON	PM
PHF	0.93		0.99

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo Canyon Rd & CA 118 EB ramps
City: Simi Valley
Control: Signalized

Project ID: 18-05149-003
Date: 3/6/2018

Total

NS/EW Streets:	Tapo Canyon Rd					Tapo Canyon Rd					CA 118 EB ramps					CA 118 EB ramps					
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	0	2	1	0	0	0	2	1	0	0	1	0	1	0	0	0	0	1	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
7:00 AM	0	251	8	0	153	3	117	85	0	0	43	1	44	0	0	0	0	10	0	7	722
7:15 AM	0	279	6	0	143	2	146	105	0	0	84	3	54	0	0	0	0	13	0	7	842
7:30 AM	0	310	11	0	145	2	238	107	0	0	96	0	77	0	0	0	0	9	0	5	1000
7:45 AM	0	328	7	0	161	1	272	65	0	0	93	0	110	0	0	0	0	8	0	4	1049
8:00 AM	0	255	11	0	121	2	212	108	0	0	61	1	81	0	0	0	0	15	0	8	875
8:15 AM	0	214	9	0	95	3	144	86	1	0	81	1	83	0	0	0	0	15	0	5	737
8:30 AM	0	201	9	0	78	2	92	54	0	0	89	1	95	0	2	0	0	10	0	5	638
8:45 AM	0	218	10	0	90	1	86	73	0	0	113	2	94	0	0	0	0	15	0	7	709
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
TOTAL VOLUMES :	0	2056	71	0	986	16	1307	683	1	0	660	9	638	0	2	0	0	95	0	48	6572
APPROACH %'s :	0.00%	66.05%	2.28%	0.00%	31.67%	0.80%	65.12%	34.03%	0.05%	0.00%	50.42%	0.69%	48.74%	0.00%	0.15%	0.00%	0.00%	66.43%	0.00%	33.57%	
PEAK HR :	07:15 AM - 08:15 AM																				TOTAL
PEAK HR VOL :	0	1172	35	0	570	7	868	385	0	0	334	4	322	0	0	0	0	45	0	24	3766
PEAK HR FACTOR :	0.000	0.893	0.795	0.000	0.885	0.875	0.798	0.891	0.000	0.000	0.870	0.333	0.732	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.898
			0.896					0.908					0.813					0.750			

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	0	2	1	0	0	0	2	1	0	0	1	0	1	0	0	0	0	1	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
4:00 PM	0	299	6	0	124	2	226	53	0	0	108	4	76	0	0	0	0	7	0	7	912
4:15 PM	0	287	7	0	102	2	230	63	3	0	84	2	76	0	0	0	0	8	0	6	870
4:30 PM	0	365	7	0	160	2	239	80	0	0	117	0	60	0	0	0	0	12	0	6	1048
4:45 PM	0	297	6	0	93	1	265	78	0	0	107	0	62	0	0	0	0	8	0	3	920
5:00 PM	0	358	8	0	140	0	251	83	0	0	91	0	66	0	0	0	0	12	0	7	1016
5:15 PM	0	248	9	0	81	4	245	60	2	0	117	0	85	0	0	0	0	9	0	2	862
5:30 PM	0	301	7	0	106	1	266	70	1	1	104	1	84	0	0	0	0	11	0	5	958
5:45 PM	0	290	6	0	96	0	221	62	0	0	117	0	84	0	0	0	0	9	0	7	892
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
TOTAL VOLUMES :	0	2445	56	0	902	12	1943	549	6	1	845	7	593	0	0	0	0	76	0	43	7478
APPROACH %'s :	0.00%	71.85%	1.65%	0.00%	26.51%	0.48%	77.38%	21.86%	0.24%	0.04%	58.48%	0.48%	41.04%	0.00%	0.00%	0.00%	0.00%	63.87%	0.00%	36.13%	
PEAK HR :	04:15 PM - 05:15 PM																				TOTAL
PEAK HR VOL :	0	1307	28	0	495	5	985	304	3	0	399	2	264	0	0	0	0	40	0	22	3854
PEAK HR FACTOR :	0.000	0.895	0.875	0.000	0.773	0.625	0.929	0.916	0.250	0.000	0.853	0.250	0.868	0.000	0.000	0.000	0.000	0.833	0.000	0.786	0.919
			0.860					0.943					0.939					0.816			

Prepared by National Data & Surveying Services

Tapo Canyon Rd & CA 118 EB ramps

Peak Hour Turning Movement Count

ID: 18-05149-003
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Tapo Canyon Rd — SOUTHBOUND

AM	385	868	7	0	1551	AM
NOON	0	0	0	0	0	NOON
PM	304	985	5	3	1749	PM
	1	2	0	0		

CA 118 EB ramps — EASTBOUND

AM	NOON	PM	
385	0	304	
0	0	0	0
334	0	399	1
4	0	2	0
322	0	264	1
AM	NOON	PM	

CONTROL

Signalized

	AM	NOON	PM
TEV	3172	0	3337
PHF	0.90		0.92

CA 118 EB ramps — WESTBOUND

	PM	NOON	AM
1	40	0	45
0	0	0	0
0	0	0	0
0	0	0	0
	35	0	46
	PM	NOON	AM

Tapo Canyon Rd — NORTHBOUND

	0	0	2	1		
PM	1249	0	0	1307	28	PM
NOON	0	0	0	0	0	NOON
AM	1190	0	0	1172	35	AM

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Alamo St
City: Simi Valley
Control: Signalized

Project ID: 18-05149-004
Date: 3/6/2018

Total

NS/EW Streets:	Tapo St				Tapo St				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
7:00 AM	26	29	3	0	23	22	30	0	16	36	12	1	9	59	17	0	283
7:15 AM	30	51	7	0	30	34	54	0	26	38	16	0	8	67	39	0	400
7:30 AM	25	105	18	0	75	139	85	0	39	74	29	0	18	121	70	0	798
7:45 AM	33	90	9	0	83	130	101	0	31	61	42	0	30	130	45	0	785
8:00 AM	28	52	8	0	24	56	50	0	19	65	35	0	20	89	31	0	477
8:15 AM	26	28	17	0	24	34	26	0	22	45	30	0	20	80	8	0	360
8:30 AM	35	28	17	0	20	30	30	0	12	63	20	0	14	140	9	0	418
8:45 AM	45	22	9	0	15	30	18	0	11	83	26	0	17	201	11	0	488
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	248	405	88	0	294	475	394	0	176	465	210	1	136	887	230	0	4009
APPROACH %'s :	33.47%	54.66%	11.88%	0.00%	25.28%	40.84%	33.88%	0.00%	20.66%	54.58%	24.65%	0.12%	10.85%	70.79%	18.36%	0.00%	
PEAK HR :	**07:15 AM - 08:15 AM**																TOTAL
PEAK HR VOL :	116	298	42	0	212	359	290	0	115	238	122	0	76	407	185	0	2460
PEAK HR FACTOR :	0.879	0.710	0.583	0.000	0.639	0.646	0.718	0.000	0.737	0.804	0.726	0.000	0.633	0.783	0.661	0.000	0.771
	0.770				0.686				0.836				0.799				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
2:00 PM	45	69	18	0	9	24	40	0	33	64	35	0	13	81	22	0	453
2:15 PM	38	46	13	0	13	54	41	0	55	101	50	0	13	75	33	0	532
2:30 PM	36	96	18	0	57	82	53	0	55	64	34	0	9	75	48	0	627
2:45 PM	47	65	16	0	84	130	75	0	45	90	48	0	22	75	21	0	718
3:00 PM	43	59	21	0	27	63	48	0	36	107	38	0	15	90	29	0	576
3:15 PM	53	50	16	0	12	44	37	0	32	98	45	0	15	74	20	0	496
3:30 PM	47	64	14	0	19	42	30	0	53	95	38	0	15	70	21	0	508
3:45 PM	45	44	16	0	22	39	30	1	41	80	28	0	16	76	18	0	456
4:00 PM	41	51	13	0	23	32	36	0	32	98	48	0	14	60	21	0	469
4:15 PM	38	48	7	0	17	33	22	0	40	99	44	0	10	74	15	0	447
4:30 PM	36	70	17	0	19	41	27	0	45	93	46	0	15	76	21	0	506
4:45 PM	61	55	23	1	14	40	35	0	34	101	45	0	14	61	26	0	510
5:00 PM	53	51	22	0	14	34	29	0	38	116	42	0	11	68	18	0	496
5:15 PM	43	45	18	0	11	39	26	0	53	130	42	0	13	76	20	0	516
5:30 PM	47	69	26	0	17	50	33	0	38	99	45	0	11	76	21	0	532
5:45 PM	36	55	19	0	33	46	39	0	39	112	49	0	19	85	27	0	559
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	709	937	277	1	391	793	601	1	669	1547	677	0	225	1192	381	0	8401
APPROACH %'s :	36.85%	48.70%	14.40%	0.05%	21.89%	44.40%	33.65%	0.06%	23.12%	53.47%	23.40%	0.00%	12.51%	66.30%	21.19%	0.00%	
PEAK HR :	**02:15 PM - 03:15 PM**																TOTAL
PEAK HR VOL :	164	266	68	0	181	329	217	0	191	362	170	0	59	315	131	0	2453
PEAK HR FACTOR :	0.872	0.693	0.810	0.000	0.539	0.633	0.723	0.000	0.868	0.846	0.850	0.000	0.670	0.875	0.682	0.000	0.854
	0.830				0.629				0.877				0.942				

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Alamo St
City: Simi Valley
Control: Signalized

Project ID: 18-05149-004
Date: 3/6/2018

Bikes

NS/EW Streets:	Tapo St				Tapo St				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
7:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	1	0	0	0	2	0	0	1	0	3	0	0	1	1	0	10
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	25.00%	0.00%	75.00%	0.00%	0.00%	50.00%	50.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	1	0	3	0	0	1	1	0	7
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.250	0.250	0.000	0.438
					0.250				0.500				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
2:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	2	1	0	0	0	1	0	0	3	0	0	7
3:15 PM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1	0	4
3:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	0	0	1	2	0	0	2	0	0	6
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	4	2	0	2	2	2	0	1	8	4	0	1	12	2	0	42
APPROACH %'s :	25.00%	50.00%	25.00%	0.00%	33.33%	33.33%	33.33%	0.00%	7.69%	61.54%	30.77%	0.00%	6.67%	80.00%	13.33%	0.00%	
PEAK HR :	02:15 PM - 03:15 PM																TOTAL
PEAK HR VOL :	0	0	1	0	2	2	1	0	0	1	2	0	0	5	0	0	14
PEAK HR FACTOR :	0.00	0.000	0.250	0.000	0.250	0.250	0.250	0.000	0.000	0.250	0.500	0.000	0.000	0.417	0.000	0.000	0.500
			0.250				0.417				0.750				0.417		

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Alamo St
City: Simi Valley
Project ID: 18-05149-004
Date: 3/6/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Tapo St		Tapo St		Alamo St		Alamo St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	0	0	1	0	0	1	3
7:15 AM	0	1	0	0	0	0	0	2	3
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	1	2
8:15 AM	0	0	0	0	0	0	1	0	1
8:30 AM	0	1	0	0	0	0	0	1	2
8:45 AM	0	1	0	0	1	0	0	1	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	4	0	0	2	0	1	6	14
APPROACH %'s :	20.00%	80.00%			100.00%	0.00%	14.29%	85.71%	
PEAK HR :	**07:15 AM - 08:15 AM**								TOTAL
PEAK HR VOL :	0	2	0	0	0	0	0	3	5
PEAK HR FACTOR :		0.500						0.375	0.417
	0.500						0.375		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
2:00 PM	1	0	2	0	0	1	0	3	7
2:15 PM	0	0	0	1	1	1	1	0	4
2:30 PM	0	2	0	1	0	0	2	4	9
2:45 PM	0	0	1	0	0	2	1	10	14
3:00 PM	0	0	2	0	2	2	0	4	10
3:15 PM	2	2	0	0	0	0	0	1	5
3:30 PM	0	1	0	0	0	0	0	0	1
3:45 PM	1	0	1	1	1	0	1	0	5
4:00 PM	0	0	0	0	1	0	1	0	2
4:15 PM	0	1	0	2	2	0	1	0	6
4:30 PM	0	0	0	0	0	0	1	0	1
4:45 PM	0	2	0	0	1	0	0	1	4
5:00 PM	1	0	0	0	1	2	1	0	5
5:15 PM	1	0	1	0	0	0	1	0	3
5:30 PM	2	1	0	0	0	2	0	1	6
5:45 PM	0	0	0	0	1	0	0	0	1
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	8	9	7	5	10	10	10	24	83
APPROACH %'s :	47.06%	52.94%	58.33%	41.67%	50.00%	50.00%	29.41%	70.59%	
PEAK HR :	**02:15 PM - 03:15 PM**								TOTAL
PEAK HR VOL :	0	2	3	2	3	5	4	18	37
PEAK HR FACTOR :		0.250	0.375	0.500	0.375	0.625	0.500	0.450	0.661
	0.250		0.625		0.500		0.500		

Prepared by National Data & Surveying Services

Tapo St & Alamo St

Peak Hour Turning Movement Count

ID: 18-05149-004
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
02:15 PM - 03:15 PM	02:00 PM - 06:00 PM

SOUTHBOUND (Tapo St)

AM	290	359	212	0	598	AM
NOON	0	0	0	0	0	NOON
PM	217	329	181	0	588	PM

EASTBOUND (Alamo St)

AM	NOON	PM	
813	0	696	⇦
0	0	0	0
115	0	191	1
238	0	362	2
122	0	170	0
AM	NOON	PM	

WESTBOUND (Alamo St)

PM	NOON	AM	
131	0	185	0
315	0	407	2
59	0	76	1
0	0	0	0
611	0	492	⇨
PM	NOON	AM	

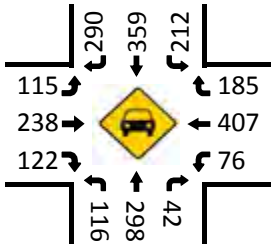
NORTHBOUND (Tapo St)

PM	558	0	164	266	68	PM
NOON	0	0	0	0	0	NOON
AM	557	0	116	298	42	AM

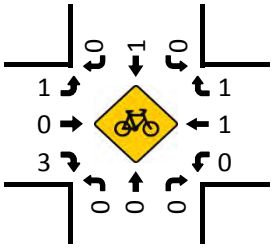
Turning movements (left, through, right, U-turn): 0 2 1 0 (SB); 0 2 1 0 (WB); 0 1 2 0 (NB)

CONTROL			
Signalized			
TEV	2460	0	2453
	AM	NOON	PM
PHF	0.77		0.85

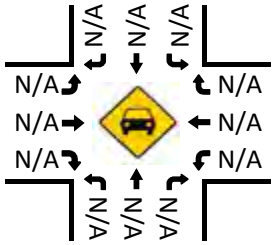
Total Vehicles (AM)



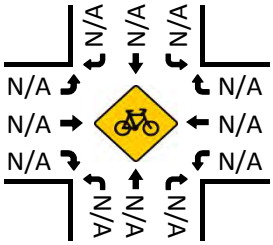
Bikes (AM)



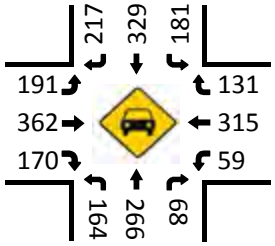
Total Vehicles (Noon)



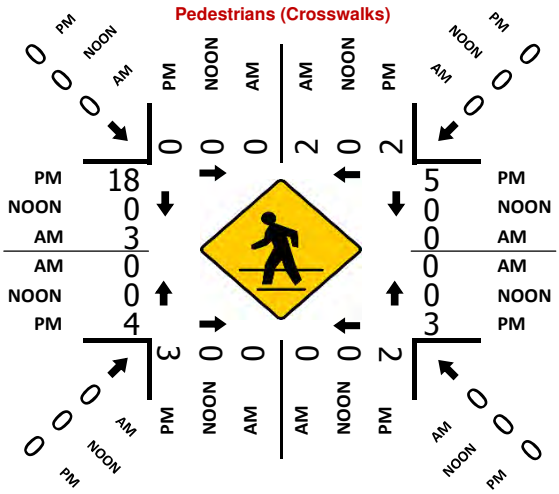
Bikes (NOON)



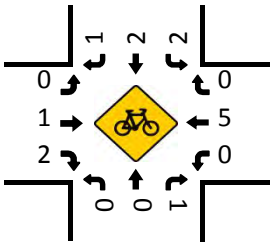
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Adam Rd
City: Simi Valley
Control: 2-Way Stop(EB/WB)

Project ID: 18-05149-005
Date: 3/6/2018

Total

NS/EW Streets:	Tapo St				Tapo St				Adam Rd				Adam Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
7:00 AM	2	36	1	0	0	33	2	0	1	0	9	0	0	0	1	0	85
7:15 AM	2	68	3	0	1	61	2	0	2	0	8	0	6	0	2	0	155
7:30 AM	1	143	4	0	1	178	5	0	10	0	11	0	3	0	6	0	362
7:45 AM	2	110	3	0	2	188	4	0	7	0	10	0	1	0	6	0	333
8:00 AM	4	79	5	0	3	108	0	0	3	0	4	0	2	0	4	0	212
8:15 AM	3	66	1	0	2	75	2	0	4	0	9	0	2	0	3	0	167
8:30 AM	2	59	0	0	2	72	1	0	3	1	4	0	1	0	4	0	149
8:45 AM	4	58	0	0	0	53	1	0	1	0	6	0	3	0	5	0	131
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	20	619	17	0	11	768	17	0	31	1	61	0	18	0	31	0	1594
APPROACH %'s :	3.05%	94.36%	2.59%	0.00%	1.38%	96.48%	2.14%	0.00%	33.33%	1.08%	65.59%	0.00%	36.73%	0.00%	63.27%	0.00%	
PEAK HR :	**07:30 AM - 08:30 AM**																TOTAL
PEAK HR VOL :	10	398	13	0	8	549	11	0	24	0	34	0	8	0	19	0	1074
PEAK HR FACTOR :	0.625	0.696	0.650	0.000	0.667	0.730	0.550	0.000	0.600	0.000	0.773	0.000	0.667	0.000	0.792	0.000	0.742
	0.711				0.732				0.690				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
2:00 PM	4	94	5	0	1	77	5	0	2	0	3	0	0	0	5	0	196
2:15 PM	2	115	3	0	1	91	3	0	7	0	6	0	2	0	4	0	234
2:30 PM	2	135	5	0	6	141	4	0	9	0	4	0	4	0	5	0	315
2:45 PM	8	114	3	0	0	165	5	0	2	0	3	0	2	0	5	0	307
3:00 PM	6	97	5	0	3	93	2	0	1	1	2	0	2	0	2	0	214
3:15 PM	4	119	4	0	2	79	2	0	4	0	2	0	2	0	1	0	219
3:30 PM	7	108	3	0	3	77	6	0	0	0	6	0	1	0	1	0	212
3:45 PM	5	110	5	0	2	92	2	0	3	0	5	0	3	1	6	0	234
4:00 PM	2	91	9	0	5	91	3	0	2	0	8	0	6	0	3	1	221
4:15 PM	8	97	5	0	1	69	2	0	0	0	5	0	2	1	3	0	193
4:30 PM	6	110	6	0	3	77	8	0	1	0	6	0	5	0	2	0	224
4:45 PM	12	126	8	0	2	112	7	0	9	0	5	0	1	0	4	0	286
5:00 PM	4	127	6	0	5	97	6	0	3	0	14	0	1	0	2	0	265
5:15 PM	13	132	0	0	1	92	3	0	5	0	6	0	0	1	5	0	258
5:30 PM	7	105	5	0	4	93	3	0	3	0	5	0	1	1	2	0	229
5:45 PM	1	117	2	0	3	86	5	0	4	0	8	0	2	0	1	0	229
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	1797	74	0	42	1532	66	0	55	1	88	0	34	4	51	1	3836
APPROACH %'s :	4.64%	91.59%	3.77%	0.00%	2.56%	93.41%	4.02%	0.00%	38.19%	0.69%	61.11%	0.00%	37.78%	4.44%	56.67%	1.11%	
PEAK HR :	**02:15 PM - 03:15 PM**																TOTAL
PEAK HR VOL :	18	461	16	0	10	490	14	0	19	1	15	0	10	0	16	0	1070
PEAK HR FACTOR :	0.563	0.854	0.800	0.000	0.417	0.742	0.700	0.000	0.528	0.250	0.625	0.000	0.625	0.000	0.800	0.000	0.849
	0.871				0.756				0.673				0.722				

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Adam Rd
City: Simi Valley
Control: 2-Way Stop(EB/WB)

Project ID: 18-05149-005
Date: 3/6/2018

Bikes

NS/EW Streets:	Tapo St				Tapo St				Adam Rd				Adam Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
7:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	0	0	0	5	1	0	0	0	1	0	0	0	0	0	11
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	83.33%	16.67%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	3	1	0	0	0	1	0	0	0	0	0	6
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.375	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500
	0.250				0.333				0.250								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
2:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
2:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	1	0	0	0	3	0	0	0	0	1	0	0	0	0	0	5
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
3:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	7	2	0	0	5	1	0	0	1	2	0	1	0	1	0	21
APPROACH %'s :	10.00%	70.00%	20.00%	0.00%	0.00%	83.33%	16.67%	0.00%	0.00%	33.33%	66.67%	0.00%	50.00%	0.00%	50.00%	0.00%	
PEAK HR :	02:15 PM - 03:15 PM																TOTAL
PEAK HR VOL :	0	3	0	0	0	3	0	0	0	0	2	0	0	0	0	0	8
PEAK HR FACTOR :	0.00	0.750	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.400
	0.750				0.250				0.500								

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Adam Rd
City: Simi Valley
Project ID: 18-05149-005
Date: 3/6/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Tapo St		Tapo St		Adam Rd		Adam Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	2	0	0	0	2
7:15 AM	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	0	0	0	0	0	2	2
7:45 AM	0	0	0	0	1	0	0	1	2
8:00 AM	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	2	1	1	0	4
8:30 AM	0	1	0	0	1	0	0	0	2
8:45 AM	0	0	0	0	1	0	0	1	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	1	0	0	7	3	1	4	16
APPROACH %'s :	0.00%	100.00%			70.00%	30.00%	20.00%	80.00%	
PEAK HR :	**07:30 AM - 08:30 AM**								TOTAL
PEAK HR VOL :	0	0	0	0	3	2	1	3	9
PEAK HR FACTOR :					0.375	0.500	0.250	0.375	0.563
					0.417		0.500		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	1	0	0	0	1
2:30 PM	0	0	0	0	0	1	2	1	4
2:45 PM	0	0	0	0	0	3	0	2	5
3:00 PM	0	0	0	0	0	2	0	3	5
3:15 PM	0	0	0	0	0	0	0	1	1
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	2	0	2
4:30 PM	0	0	0	0	2	0	0	1	3
4:45 PM	0	0	0	0	1	1	0	0	2
5:00 PM	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	2	0	0	2
5:30 PM	0	0	0	0	0	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	4	9	4	10	27
APPROACH %'s :					30.77%	69.23%	28.57%	71.43%	
PEAK HR :	**02:15 PM - 03:15 PM**								TOTAL
PEAK HR VOL :	0	0	0	0	1	6	2	6	15
PEAK HR FACTOR :					0.250	0.500	0.250	0.500	0.750
					0.583		0.667		

Prepared by National Data & Surveying Services

Tapo St & Adam Rd

Peak Hour Turning Movement Count

ID: 18-05149-005
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
02:15 PM - 03:15 PM	02:00 PM - 06:00 PM

Tapo St — SOUTHBOUND

AM	11	549	8	0	441	AM
NOON	0	0	0	0	0	NOON
PM	14	490	10	0	496	PM

Adam Rd — EASTBOUND

AM	NOON	PM	
21	0	32	
0	0	0	0
24	0	19	0
0	0	1	1
34	0	15	0
AM	NOON	PM	

Adam Rd — WESTBOUND

PM	NOON	AM	
16	0	19	0
0	0	0	1
10	0	8	0
0	0	0	0
27	0	21	
PM	NOON	AM	

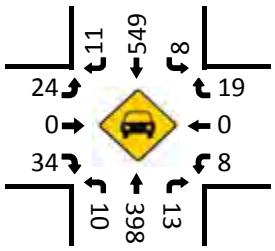
Tapo St — NORTHBOUND

PM	515	0	18	461	16	PM
NOON	0	0	0	0	0	NOON
AM	591	0	10	398	13	AM

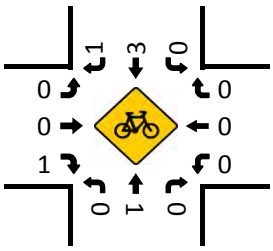
Turning movements (red): 0 2 1 0 | 0 1 2 0

CONTROL			
2-Way Stop(EB/WB)			
TEV	1074	0	1070
	AM	NOON	PM
PHF	0.74		0.85

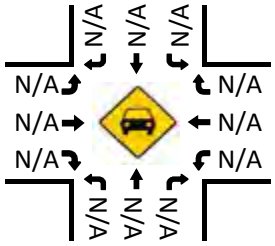
Total Vehicles (AM)



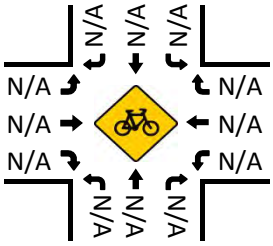
Bikes (AM)



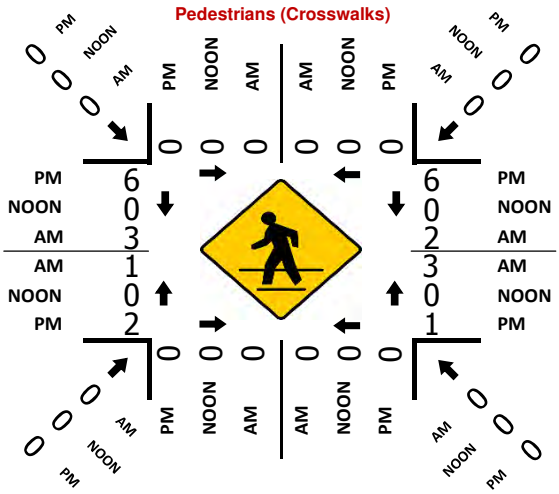
Total Vehicles (Noon)



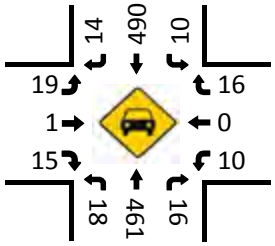
Bikes (NOON)



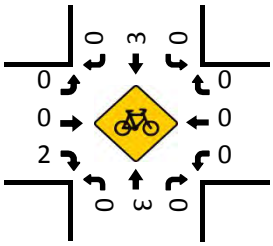
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Cochran St
City: Simi Valley
Control: Signalized

Project ID: 18-05149-006
Date: 3/6/2018

Total

NS/EW Streets:	Tapo St				Tapo St				Cochran St				Cochran St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
7:00 AM	18	24	11	0	13	39	14	0	12	38	16	0	18	50	14	0	267
7:15 AM	16	43	7	0	34	38	24	0	34	82	21	0	19	50	22	0	390
7:30 AM	19	70	24	0	70	78	55	0	53	97	16	0	34	120	27	0	663
7:45 AM	23	76	20	0	29	131	53	0	43	102	39	0	47	83	32	0	678
8:00 AM	16	58	17	0	31	63	36	0	38	72	31	0	28	69	31	0	490
8:15 AM	18	75	21	0	22	89	49	0	36	66	26	0	24	64	39	0	529
8:30 AM	23	33	26	0	20	59	32	0	23	71	38	0	25	132	16	0	498
8:45 AM	20	39	23	0	16	60	38	0	29	66	23	0	43	167	13	0	537
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	153	418	149	0	235	557	301	0	268	594	210	0	238	735	194	0	4052
APPROACH %'s :	21.25%	58.06%	20.69%	0.00%	21.50%	50.96%	27.54%	0.00%	25.00%	55.41%	19.59%	0.00%	20.39%	62.98%	16.62%	0.00%	
PEAK HR :	**07:30 AM - 08:30 AM**																TOTAL
PEAK HR VOL :	76	279	82	0	152	361	193	0	170	337	112	0	133	336	129	0	2360
PEAK HR FACTOR :	0.826	0.918	0.854	0.000	0.543	0.689	0.877	0.000	0.802	0.826	0.718	0.000	0.707	0.700	0.827	0.000	0.870
	0.918				0.829				0.841				0.826				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	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	TOTAL
4:00 PM	62	75	49	0	24	67	27	0	28	105	55	0	32	67	23	0	614
4:15 PM	43	76	30	0	15	72	31	0	38	81	61	0	39	67	20	0	573
4:30 PM	76	79	43	0	22	78	28	0	39	89	39	0	23	71	20	0	607
4:45 PM	58	96	41	0	18	79	30	0	39	127	50	0	21	90	16	0	665
5:00 PM	58	90	52	0	21	79	23	0	38	105	38	0	36	69	18	0	627
5:15 PM	53	83	33	0	28	75	35	0	24	116	48	0	31	69	17	0	612
5:30 PM	48	91	29	0	23	72	27	0	34	123	48	0	31	92	25	0	643
5:45 PM	39	88	42	0	23	95	50	0	42	101	45	0	27	55	22	0	629
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	437	678	319	0	174	617	251	0	282	847	384	0	240	580	161	0	4970
APPROACH %'s :	30.47%	47.28%	22.25%	0.00%	16.70%	59.21%	24.09%	0.00%	18.64%	55.98%	25.38%	0.00%	24.46%	59.12%	16.41%	0.00%	
PEAK HR :	**04:45 PM - 05:45 PM**																TOTAL
PEAK HR VOL :	217	360	155	0	90	305	115	0	135	471	184	0	119	320	76	0	2547
PEAK HR FACTOR :	0.935	0.938	0.745	0.000	0.804	0.965	0.821	0.000	0.865	0.927	0.920	0.000	0.826	0.870	0.760	0.000	0.958
	0.915				0.924				0.914				0.870				

Prepared by National Data & Surveying Services

Tapo St & Cochran St

Peak Hour Turning Movement Count

ID: 18-05149-006
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Tapo St)

	Left	Thru	Right	U-turn	Total	
AM	193	361	152	0	578	AM
NOON	0	0	0	0	0	NOON
PM	115	305	90	0	571	PM
	0	2	1	0		

EASTBOUND (Cochran St)

AM	NOON	PM	
605	0	652	
0	0	0	0
170	0	135	1
337	0	471	2
112	0	184	0

WESTBOUND (Cochran St)

	PM	NOON	AM
0	76	0	129
2	320	0	336
1	119	0	133
0	0	0	0
	716	0	571

NORTHBOUND (Tapo St)

	Left	Thru	Right	U-turn	Total	
PM	608	0	217	360	155	PM
NOON	0	0	0	0	0	NOON
AM	606	0	76	279	82	AM
	0	1	2	0		

CONTROL

Signalized

	AM	NOON	PM
TEV	2360	0	2547
PHF	0.87		0.96

National Data & Surveying Services Intersection Turning Movement Count

Location: Stearns St & Alamo St
City: Simi Valley
Control: Signalized

Project ID: 18-05149-007
Date: 3/6/2018

Total

NS/EW Streets:	Stearns St				Stearns St				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	0.5	1.5	1	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	TOTAL
7:00 AM	31	4	2	0	0	11	3	0	3	22	103	0	7	28	0	0	214
7:15 AM	93	1	4	0	0	12	11	0	0	39	121	0	17	35	0	0	333
7:30 AM	124	6	8	0	1	12	12	0	3	90	152	0	12	121	1	0	542
7:45 AM	101	5	9	0	0	15	6	0	7	91	151	0	11	102	0	0	498
8:00 AM	65	4	10	0	0	7	9	0	4	60	91	0	16	54	0	0	320
8:15 AM	69	4	6	0	0	10	7	0	3	28	65	0	6	30	0	0	228
8:30 AM	133	3	6	1	1	7	8	0	4	36	79	1	7	52	0	0	338
8:45 AM	146	4	5	1	1	5	7	0	8	32	70	0	12	53	1	0	345
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	762	31	50	2	3	79	63	0	32	398	832	1	88	475	2	0	2818
APPROACH %'s :	90.18%	3.67%	5.92%	0.24%	2.07%	54.48%	43.45%	0.00%	2.53%	31.51%	65.87%	0.08%	15.58%	84.07%	0.35%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	383	16	31	0	1	46	38	0	14	280	515	0	56	312	1	0	1693
PEAK HR FACTOR :	0.772	0.667	0.775	0.000	0.250	0.767	0.792	0.000	0.500	0.769	0.847	0.000	0.824	0.645	0.250	0.000	0.781
	0.779				0.850				0.812				0.688				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	0.5	1.5	1	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	TOTAL
4:00 PM	64	14	21	0	0	7	7	0	9	51	63	0	7	41	0	0	284
4:15 PM	98	11	16	0	0	9	4	0	6	49	64	0	6	39	2	0	304
4:30 PM	89	11	10	0	0	6	6	0	10	54	71	0	17	39	1	0	314
4:45 PM	79	10	20	0	0	6	8	0	9	55	62	0	7	50	0	0	306
5:00 PM	85	17	13	0	0	6	5	0	9	49	93	0	7	36	1	0	321
5:15 PM	90	6	19	1	0	3	9	0	14	56	78	0	9	33	0	0	318
5:30 PM	102	8	22	0	0	7	7	0	5	54	73	0	5	51	0	0	334
5:45 PM	106	12	19	0	1	9	7	0	11	64	78	0	5	38	1	0	351
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	713	89	140	1	1	53	53	0	73	432	582	0	63	327	5	0	2532
APPROACH %'s :	75.61%	9.44%	14.85%	0.11%	0.93%	49.53%	49.53%	0.00%	6.72%	39.74%	53.54%	0.00%	15.95%	82.78%	1.27%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	383	43	73	1	1	25	28	0	39	223	322	0	26	158	2	0	1324
PEAK HR FACTOR :	0.903	0.632	0.830	0.250	0.250	0.694	0.778	0.000	0.696	0.871	0.866	0.000	0.722	0.775	0.500	0.000	0.943
	0.912				0.794				0.954				0.830				

Prepared by National Data & Surveying Services

Stearns St & Alamo St

Peak Hour Turning Movement Count

ID: 18-05149-007
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Stearns St)

AM	38	46	1	0	31	AM
NOON	0	0	0	0	0	NOON
PM	28	25	1	0	84	PM
	1	1.5	0.5	0		

EASTBOUND (Alamo St)

AM	NOON	PM		
733	0	569	⇦	
0	0	0	↶	0
14	0	39	↱	1
280	0	223	→	2
515	0	322	↷	0
AM	NOON	PM		

WESTBOUND (Alamo St)

		PM	NOON	AM
0	↰	2	0	1
2	←	158	0	312
1	↰	26	0	56
0	↶	0	0	0
	⇨	297	0	312
		PM	NOON	AM

NORTHBOUND (Stearns St)

	0	1.5	0.5	1		
PM	374	1	383	43	73	PM
NOON	0	0	0	0	0	NOON
AM	617	0	383	16	31	AM

CONTROL			
Signalized			
TEV	1693	0	1324
	AM	NOON	PM
PHF	0.78		0.94

National Data & Surveying Services Intersection Turning Movement Count

Location: Stearns St & Barnard St/CA 118 WB ramps
City: Simi Valley
Control: Signalized

Project ID: 18-05149-008
Date: 3/6/2018

Total

NS/EW Streets:	Stearns St					Stearns St					Barnard St/CA 118 WB ramps					Barnard St/CA 118 WB ramps					
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	1	2	1	0	0	0	2	0	0	0	1	0	1	0	0	1	0.5	0.5	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
7:00 AM	4	30	91	0	0	0	119	0	0	26	1	0	28	0	7	47	16	20	0	0	389
7:15 AM	3	60	85	0	1	0	132	2	0	38	2	0	28	0	5	56	13	45	0	0	470
7:30 AM	10	99	95	1	1	0	171	2	0	36	2	0	15	0	9	65	23	36	0	0	565
7:45 AM	8	73	88	0	0	0	144	1	0	33	3	0	22	0	6	86	21	43	0	0	528
8:00 AM	4	48	67	0	0	0	86	1	0	32	2	0	22	0	3	71	24	33	0	0	393
8:15 AM	6	33	70	0	0	0	74	2	0	17	1	1	20	0	5	86	25	51	0	0	391
8:30 AM	10	41	49	0	0	0	90	2	0	15	3	0	23	0	1	163	22	105	0	2	526
8:45 AM	11	53	53	1	0	0	90	6	0	4	2	0	15	0	1	185	54	126	0	2	603
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
TOTAL VOLUMES :	56	437	598	2	2	0	906	16	0	201	16	1	173	0	37	759	198	459	0	4	3865
APPROACH %'s :	5.11%	39.91%	54.61%	0.18%	0.18%	0.00%	80.68%	1.42%	0.00%	17.90%	7.05%	0.44%	76.21%	0.00%	16.30%	53.45%	13.94%	32.32%	0.00%	0.28%	
PEAK HR :	07:15 AM - 08:15 AM																				TOTAL
PEAK HR VOL :	25	280	335	1	2	0	533	6	0	139	9	0	87	0	23	278	81	157	0	0	1956
PEAK HR FACTOR :	0.625	0.707	0.882	0.250	0.500	0.000	0.779	0.750	0.000	0.914	0.750	0.000	0.777	0.000	0.639	0.808	0.844	0.872	0.000	0.000	0.865
			0.780					0.811					0.850					0.860			

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	1	2	1	0	0	0	2	0	0	0	1	0	1	0	0	1	0.5	0.5	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
4:00 PM	4	82	50	2	1	0	68	2	0	17	0	0	6	0	4	100	32	38	0	0	406
4:15 PM	13	72	50	0	0	0	68	1	0	21	4	0	13	0	2	82	32	73	0	0	431
4:30 PM	2	68	55	0	0	0	81	2	0	28	3	0	19	0	8	97	34	54	0	0	451
4:45 PM	7	66	66	0	0	0	60	5	0	21	3	1	14	0	2	96	34	60	0	0	435
5:00 PM	4	103	52	1	1	0	91	2	0	30	3	0	18	0	7	90	25	60	1	0	488
5:15 PM	5	79	45	2	0	0	87	4	0	26	3	0	14	0	6	104	29	55	0	0	459
5:30 PM	4	91	69	2	0	0	81	3	0	22	4	0	17	0	6	89	31	63	0	1	483
5:45 PM	5	85	56	1	0	0	84	3	0	24	1	0	7	0	3	107	28	60	0	0	464
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	TOTAL
TOTAL VOLUMES :	44	646	443	8	2	0	620	22	0	189	21	1	108	0	38	765	245	463	1	1	3617
APPROACH %'s :	3.85%	56.52%	38.76%	0.70%	0.17%	0.00%	74.61%	2.65%	0.00%	22.74%	12.50%	0.60%	64.29%	0.00%	22.62%	51.86%	16.61%	31.39%	0.07%	0.07%	
PEAK HR :	05:00 PM - 06:00 PM																				TOTAL
PEAK HR VOL :	18	358	222	6	1	0	343	12	0	102	11	0	56	0	22	390	113	238	1	1	1894
PEAK HR FACTOR :	0.900	0.869	0.804	0.750	0.250	0.000	0.942	0.750	0.000	0.850	0.688	0.000	0.778	0.000	0.786	0.911	0.911	0.944	0.250	0.250	0.970
			0.911					0.929					0.795					0.953			

Prepared by National Data & Surveying Services

Stearns St & Barnard St/CA 118 WB ramps

Peak Hour Turning Movement Count

ID: 18-05149-008
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Stearns St)

AM	6	533	0	0	446	AM
NOON	0	0	0	0	0	NOON
PM	12	343	0	0	607	PM
	0	2	0	0		

EASTBOUND (Barnard St/CA 118 WB ramps)

AM	NOON	PM		
112	0	143		
0	0	0	0	
9	0	11	1	
0	0	0	0	
87	0	56	1	
AM	NOON	PM		

WESTBOUND (Barnard St/CA 118 WB ramps)

				PM	NOON	AM
0.5				238	0	157
0.5				113	0	81
1				390	0	278
0				1	0	0
				223	0	335
				PM	NOON	AM

NORTHBOUND (Stearns St)

PM	795	6	18	358	222	PM
NOON	0	0	0	0	0	NOON
AM	899	1	25	280	335	AM
		0	1	2	1	

CONTROL			
Signalized			
TEV	1792	0	1768
	AM	NOON	PM
PHF	0.87		0.97

National Data & Surveying Services Intersection Turning Movement Count

Location: Stearns St & CA 118 EB ramps
City: Simi Valley
Control: Signalized

Project ID: 18-05149-009
Date: 3/6/2018

Total

NS/EW Streets:	Stearns St					Stearns St					CA 118 EB ramps					CA 118 EB ramps					
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	0	3	0	0	0	1	2	1	0	0	0.5	0.5	1	0	0	1	1	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
7:00 AM	0	222	2	0	108	8	98	77	0	0	12	2	33	0	0	1	0	4	0	5	572
7:15 AM	0	225	2	0	109	8	106	104	0	0	4	4	62	0	0	1	1	2	0	0	628
7:30 AM	0	269	1	0	86	15	121	102	0	0	6	6	81	0	0	1	0	7	0	5	700
7:45 AM	0	243	0	0	94	4	150	90	0	0	17	6	65	0	0	2	0	7	0	0	678
8:00 AM	0	219	1	0	82	2	112	97	0	0	16	3	52	0	0	0	0	4	0	3	591
8:15 AM	0	198	0	0	96	7	111	56	0	0	14	2	47	0	0	4	0	6	0	1	542
8:30 AM	0	165	0	0	90	2	182	58	0	0	14	4	33	0	0	2	0	4	0	4	558
8:45 AM	0	154	1	0	78	7	248	53	0	0	23	2	52	0	0	2	0	3	0	0	623
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
TOTAL VOLUMES :	0	1695	7	0	743	53	1128	637	0	0	106	29	425	0	0	13	1	37	0	18	4892
APPROACH %'s :	0.00%	69.33%	0.29%	0.00%	30.39%	2.92%	62.05%	35.04%	0.00%	0.00%	18.93%	5.18%	75.89%	0.00%	0.00%	18.84%	1.45%	53.62%	0.00%	26.09%	
PEAK HR :	07:15 AM - 08:15 AM																				TOTAL
PEAK HR VOL :	0	956	4	0	371	29	489	393	0	0	43	19	260	0	0	4	1	20	0	8	2597
PEAK HR FACTOR :	0.000	0.888	0.500	0.000	0.851	0.483	0.815	0.945	0.000	0.000	0.632	0.792	0.802	0.000	0.000	0.500	0.250	0.714	0.000	0.400	0.928
			0.935					0.933					0.866					0.635			

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					
	0	3	0	0	0	1	2	1	0	0	0.5	0.5	1	0	0	1	1	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
4:00 PM	0	186	2	0	80	4	156	31	4	2	27	7	52	0	1	2	0	5	0	2	561
4:15 PM	0	159	2	0	57	7	113	33	2	0	26	6	57	0	0	0	0	9	0	2	473
4:30 PM	0	189	4	0	88	14	126	42	1	0	32	5	60	0	0	1	1	9	0	7	579
4:45 PM	0	149	2	0	77	11	125	39	3	0	31	6	62	0	0	1	0	10	0	2	518
5:00 PM	0	236	2	0	102	4	155	36	2	1	36	6	85	0	0	3	0	14	0	2	684
5:15 PM	0	167	1	0	91	14	152	49	4	0	28	3	64	0	0	1	0	6	0	4	584
5:30 PM	0	159	3	0	53	10	134	35	4	1	33	21	93	0	0	2	0	9	0	2	559
5:45 PM	0	208	1	0	78	14	156	42	1	0	34	11	73	0	0	1	1	5	0	4	629
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	TOTAL
TOTAL VOLUMES :	0	1453	17	0	626	78	1117	307	21	4	247	65	546	0	1	11	2	67	0	25	4587
APPROACH %'s :	0.00%	69.32%	0.81%	0.00%	29.87%	5.11%	73.15%	20.10%	1.38%	0.26%	28.75%	7.57%	63.56%	0.00%	0.12%	10.48%	1.90%	63.81%	0.00%	23.81%	
PEAK HR :	05:00 PM - 06:00 PM																				TOTAL
PEAK HR VOL :	0	770	7	0	324	42	597	162	11	2	131	41	315	0	0	7	1	34	0	12	2456
PEAK HR FACTOR :	0.000	0.816	0.583	0.000	0.794	0.750	0.957	0.827	0.688	0.500	0.910	0.488	0.847	0.000	0.000	0.583	0.250	0.607	0.000	0.750	0.898
			0.810					0.929					0.828					0.711			

Prepared by National Data & Surveying Services

Stearns St & CA 118 EB ramps

Peak Hour Turning Movement Count

ID: 18-05149-009
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

Stearns St — SOUTHBOUND

AM	393	489	29	0	1019	AM
NOON	0	0	0	0	0	NOON
PM	162	597	42	11	946	PM
	1	2	1	0		

CA 118 EB ramps — EASTBOUND

AM	NOON	PM	
394	0	163	
0	0	0	0
43	0	131	0.5
19	0	41	0.5
260	0	315	1
AM	NOON	PM	

CA 118 EB ramps — WESTBOUND

	PM	NOON	AM
0	34	0	20
1	1	0	1
1	7	0	4
0	0	0	0
	90	0	52
	PM	NOON	AM

Stearns St — NORTHBOUND

PM	919	0	0	770	7	PM
NOON	0	0	0	0	0	NOON
AM	753	0	0	956	4	AM
		0	0	3	0	

CONTROL			
Signalized			
TEV	2218	0	2118
	AM	NOON	PM
PHF	0.93		0.90

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Northern Dwy Bellwood Shopping Center
City: Simi Valley
Control: No Control

Project ID: 18-05149-010
Date: 3/6/2018

Total

NS/EW Streets:	Tapo St				Tapo St				Northern Dwy Bellwood Shopping Center				
AM	NORTHBOUND				SOUTHBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	WL	WT	WR	WU	TOTAL
7:00 AM	0	38	0	0	0	66	0	0	0	0	1	0	105
7:15 AM	0	88	0	0	0	101	0	0	0	0	0	0	189
7:30 AM	0	185	0	1	2	278	0	0	0	0	0	0	466
7:45 AM	0	211	0	0	0	326	0	0	0	0	0	0	537
8:00 AM	0	124	1	0	0	170	0	0	0	0	0	0	295
8:15 AM	0	72	0	0	1	88	0	0	1	0	0	0	162
8:30 AM	0	50	1	0	1	73	0	0	0	0	0	0	125
8:45 AM	0	50	0	0	2	74	0	0	1	0	0	0	127
	NL	NT	NR	NU	SL	ST	SR	SU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	818	2	1	6	1176	0	0	2	0	1	0	2006
APPROACH %'s :	0.00%	99.63%	0.24%	0.12%	0.51%	99.49%	0.00%	0.00%	66.67%	0.00%	33.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM												TOTAL
PEAK HR VOL :	0	608	1	1	2	875	0	0	0	0	0	0	1487
PEAK HR FACTOR :	0.000	0.720	0.250	0.250	0.250	0.671	0.000	0.000	0.000	0.000	0.000	0.000	0.692
		0.723				0.673							

PM	NORTHBOUND				SOUTHBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	WL	WT	WR	WU	TOTAL
4:00 PM	0	101	0	0	2	94	0	0	0	0	1	0	198
4:15 PM	0	105	1	0	3	75	0	0	2	0	0	0	186
4:30 PM	0	120	0	0	2	80	0	0	1	0	1	0	204
4:45 PM	0	105	0	0	0	85	0	0	1	0	2	0	193
5:00 PM	0	132	0	0	2	78	0	0	1	0	0	0	213
5:15 PM	0	98	0	0	2	70	0	0	2	0	1	0	173
5:30 PM	0	121	0	0	2	84	0	0	1	0	0	0	208
5:45 PM	0	117	0	0	1	89	0	0	3	0	0	0	210
	NL	NT	NR	NU	SL	ST	SR	SU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	899	1	0	14	655	0	0	11	0	5	0	1585
APPROACH %'s :	0.00%	99.89%	0.11%	0.00%	2.09%	97.91%	0.00%	0.00%	68.75%	0.00%	31.25%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM												TOTAL
PEAK HR VOL :	0	468	0	0	7	321	0	0	7	0	1	0	804
PEAK HR FACTOR :	0.000	0.886	0.000	0.000	0.875	0.902	0.000	0.000	0.583	0.000	0.250	0.000	0.944
		0.886				0.911				0.667			

Prepared by National Data & Surveying Services

Tapo St & Northern Dwy Bellwood Shopping Center

Peak Hour Turning Movement Count

ID: 18-05149-010
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Tapo St)

AM	0	875	2	0	608	AM
NOON	0	0	0	0	0	NOON
PM	0	321	7	0	469	PM
	0	2	0	0		

EASTBOUND

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Northern Dwy Bellwood Shoppin

	PM	NOON	AM
0	1	0	0
1	0	0	0
0	7	0	0
0	0	0	0
	7	0	3
	PM	NOON	AM

CONTROL

No Control

TEV	1487	0	804
	AM	NOON	PM
PHF	0.69		0.94

NORTHBOUND (Tapo St)

	0	0	2	0		
PM	328	0	0	468	0	PM
NOON	0	0	0	0	0	NOON
AM	876	1	0	608	1	AM

National Data & Surveying Services Intersection Turning Movement Count

Location: Tapo St & Southern Dwy Bellwood Shopping Center
City: Simi Valley
Control: No Control

Project ID: 18-05149-011
Date: 3/6/2018

Total

NS/EW Streets:	Tapo St				Tapo St				Residential				Southern Dwy Bellwood Shopping Center				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	50	1	0	0	72	0	0	0	0	0	0	0	0	1	0	124
7:15 AM	0	100	3	0	0	106	0	0	0	0	0	0	0	0	1	0	210
7:30 AM	0	203	0	0	0	284	0	0	0	0	0	0	0	0	1	0	488
7:45 AM	0	189	1	0	0	324	0	0	0	0	0	0	0	0	1	0	515
8:00 AM	0	112	1	0	0	156	0	0	0	0	0	0	0	0	0	0	269
8:15 AM	0	60	2	0	0	88	0	0	0	0	0	0	0	0	2	0	152
8:30 AM	0	45	0	0	0	67	0	0	0	0	0	0	0	0	3	0	115
8:45 AM	0	43	1	0	0	72	0	0	0	0	0	0	0	0	2	0	118
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	802	9	0	0	1169	0	0	0	0	0	0	0	0	11	0	1991
APPROACH %'s :	0.00%	98.89%	1.11%	0.00%	0.00%	100.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	**07:15 AM - 08:15 AM**																TOTAL
PEAK HR VOL :	0	604	5	0	0	870	0	0	0	0	0	0	0	0	3	0	1482
PEAK HR FACTOR :	0.000	0.744	0.417	0.000	0.000	0.671	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.719
	0.750				0.671								0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	102	3	0	0	91	0	0	0	0	0	0	0	0	7	0	203
4:15 PM	0	102	4	0	0	75	0	0	0	0	0	0	0	0	5	0	186
4:30 PM	0	120	7	0	0	91	0	0	0	0	0	0	0	0	4	0	222
4:45 PM	0	109	6	0	0	88	0	0	0	0	0	0	0	0	4	0	207
5:00 PM	0	113	5	0	0	69	0	0	0	0	0	0	0	0	6	0	193
5:15 PM	0	108	3	0	0	82	0	0	0	0	0	0	0	0	2	0	195
5:30 PM	0	105	6	0	0	96	0	0	0	0	0	0	0	0	7	0	214
5:45 PM	0	120	6	0	0	110	0	0	0	0	0	0	0	0	1	0	237
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	879	40	0	0	702	0	0	0	0	0	0	0	0	36	0	1657
APPROACH %'s :	0.00%	95.65%	4.35%	0.00%	0.00%	100.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**																TOTAL
PEAK HR VOL :	0	446	20	0	0	357	0	0	0	0	0	0	0	0	16	0	839
PEAK HR FACTOR :	0.000	0.929	0.833	0.000	0.000	0.811	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.571	0.000	0.885
	0.925				0.811								0.571				

Prepared by National Data & Surveying Services

Tapo St & Southern Dwy Bellwood Shopping Center

Peak Hour Turning Movement Count

ID: 18-05149-011
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Tapo St)

AM	0	870	0	0	607	AM
NOON	0	0	0	0	0	NOON
PM	0	357	0	0	462	PM
	0	2	0	0		

EASTBOUND (Residential)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Southern Dwy Bellwood Shopping Center)

	PM	NOON	AM
0	16	0	3
1	0	0	0
0	0	0	0
0	0	0	0
	20	0	5
	PM	NOON	AM

NORTHBOUND (Tapo St)

PM	357	0	0	446	20	PM
NOON	0	0	0	0	0	NOON
AM	870	0	0	604	5	AM
		0	1	2	0	

CONTROL			
No Control			
TEV	1482	0	839
	AM	NOON	PM
PHF	0.72		0.89

National Data & Surveying Services Intersection Turning Movement Count

Location: Eastern Dwy Bellwood Shopping Center & Alamo St
City: Simi Valley
Control: 1-Way Stop(NB)

Project ID: 18-05149-012
Date: 3/6/2018

Total

NS/EW Streets:	Residential				Eastern Dwy Bellwood Shopping Center				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	58	0	0	0	96	0	0	154
7:15 AM	0	0	0	0	0	0	1	0	0	86	1	0	0	123	0	0	211
7:30 AM	0	0	1	0	0	0	0	0	0	183	3	0	0	208	0	0	395
7:45 AM	0	0	1	0	0	0	0	0	0	128	7	0	2	205	0	0	343
8:00 AM	1	0	3	0	0	0	0	0	0	89	2	0	2	126	0	0	223
8:15 AM	1	0	3	0	0	0	0	0	0	92	1	0	3	103	0	0	203
8:30 AM	0	0	0	0	0	0	0	0	0	92	2	0	3	176	0	0	273
8:45 AM	1	0	2	0	0	0	0	0	0	101	2	0	1	221	0	0	328
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	10	0	0	0	1	0	0	829	18	0	11	1258	0	0	2130
APPROACH %'s :	23.08%	0.00%	76.92%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	97.87%	2.13%	0.00%	0.87%	99.13%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	0	5	0	0	0	1	0	0	486	13	0	4	662	0	0	1172
PEAK HR FACTOR :	0.250	0.000	0.417	0.000	0.000	0.000	0.250	0.000	0.000	0.664	0.464	0.000	0.500	0.796	0.000	0.000	0.742
	0.375				0.250				0.671				0.800				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	9	0	0	0	0	0	0	143	3	0	1	92	0	0	250
4:15 PM	1	0	4	0	0	0	1	0	0	111	10	0	5	101	0	0	233
4:30 PM	0	0	9	0	0	0	0	0	0	118	6	0	3	107	0	0	243
4:45 PM	1	0	6	0	0	0	3	0	0	137	6	0	3	108	0	0	264
5:00 PM	2	0	6	0	0	0	2	0	0	148	9	0	2	94	0	0	263
5:15 PM	2	0	12	0	0	0	1	0	0	143	9	0	2	105	0	0	274
5:30 PM	0	0	6	0	0	0	1	0	0	140	2	0	3	119	0	0	271
5:45 PM	0	0	8	0	0	0	1	0	0	156	3	0	4	118	0	0	290
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	8	0	60	0	0	0	9	0	0	1096	48	0	23	844	0	0	2088
APPROACH %'s :	11.76%	0.00%	88.24%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	95.80%	4.20%	0.00%	2.65%	97.35%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	4	0	32	0	0	0	5	0	0	587	23	0	11	436	0	0	1098
PEAK HR FACTOR :	0.500	0.000	0.667	0.000	0.000	0.000	0.625	0.000	0.000	0.941	0.639	0.000	0.688	0.916	0.000	0.000	0.947
	0.643				0.625				0.959				0.916				

Prepared by National Data & Surveying Services

Eastern Dwy Bellwood Shopping Center & Alamo St

Peak Hour Turning Movement Count

ID: 18-05149-012
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Eastern Dwy Bellwood Shopping Center

AM	1	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	5	0	0	0	0	PM

EASTBOUND — Alamo St

AM	NOON	PM	
664	0	445	⇦
0	0	0	0 ↶
0	0	0	0 ↱
486	0	587	2 →
13	0	23	0 ↷
AM	NOON	PM	

WESTBOUND — Alamo St

	PM	NOON	AM
0 ↰	0	0	0
2 ←	436	0	662
0 ↶	11	0	4
0 ↶	0	0	0
⇨	619	0	491
	PM	NOON	AM

NORTHBOUND — Residential

PM	34	0	4	0	32	PM
NOON	0	0	0	0	0	NOON
AM	17	0	1	0	5	AM

	0	1	0	0
	0	1	0	1

CONTROL

1-Way Stop(NB)

	AM	NOON	PM
TEV	1172	0	1098
PHF	0.74		0.95

National Data & Surveying Services Intersection Turning Movement Count

Location: Middle Dwy Bellwood Shopping Center & Alamo St
City: Simi Valley
Control: No Control

Project ID: 18-05149-013
Date: 3/6/2018

Total

NS/EW Streets:	Residential				Middle Dwy Bellwood Shopping Center				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	1	0	1	57	0	0	0	89	1	0	149
7:15 AM	0	0	0	0	2	0	1	0	0	83	0	0	0	123	1	0	210
7:30 AM	0	0	0	0	0	0	1	0	0	173	0	1	0	197	2	0	374
7:45 AM	0	0	0	0	0	0	1	0	0	142	0	0	0	216	0	0	359
8:00 AM	0	0	0	0	1	0	1	0	2	90	0	0	0	132	6	0	232
8:15 AM	0	0	0	0	1	0	2	0	4	85	0	0	0	105	2	0	199
8:30 AM	0	0	0	0	2	0	1	0	1	95	0	0	0	179	4	0	282
8:45 AM	0	0	0	0	2	0	5	0	2	103	0	0	0	216	2	0	330
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	8	0	13	0	10	828	0	1	0	1257	18	0	2135
APPROACH %'s :					38.10%	0.00%	61.90%	0.00%	1.19%	98.69%	0.00%	0.12%	0.00%	98.59%	1.41%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	3	0	4	0	2	488	0	1	0	668	9	0	1175
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.375	0.000	1.000	0.000	0.250	0.705	0.000	0.250	0.000	0.773	0.375	0.000	0.785
					0.583				0.705				0.784				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	3	0	5	0	4	143	0	0	0	85	2	0	242
4:15 PM	0	0	0	0	1	0	2	0	3	106	3	0	0	106	7	0	228
4:30 PM	0	0	0	0	3	0	5	0	2	130	0	0	0	106	4	0	250
4:45 PM	0	0	0	0	1	0	5	0	6	134	2	0	0	101	6	0	255
5:00 PM	0	0	1	0	3	0	2	0	1	157	1	0	1	96	3	0	265
5:15 PM	0	1	0	0	6	0	3	0	5	150	0	0	0	101	5	0	271
5:30 PM	0	0	0	0	3	0	2	0	1	142	0	0	0	118	6	0	272
5:45 PM	0	0	0	0	1	0	3	0	3	164	0	0	0	120	5	0	296
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	1	0	21	0	27	0	25	1126	6	0	1	833	38	0	2079
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	43.75%	0.00%	56.25%	0.00%	2.16%	97.32%	0.52%	0.00%	0.11%	95.53%	4.36%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	1	0	13	0	10	0	10	613	1	0	1	435	19	0	1104
PEAK HR FACTOR :	0.000	0.250	0.250	0.000	0.542	0.000	0.833	0.000	0.500	0.934	0.250	0.000	0.250	0.906	0.792	0.000	0.932
		0.500			0.639				0.934				0.910				

Prepared by National Data & Surveying Services

Middle Dwy Bellwood Shopping Center & Alamo St

Peak Hour Turning Movement Count

ID: 18-05149-013
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

Peak Hours	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Middle Dwy Bellwood Shopping Center

AM	4	0	3	0	11	AM
NOON	0	0	0	0	0	NOON
PM	10	0	13	0	30	PM

EASTBOUND — Alamo St

AM	NOON	PM	
673	0	445	⇦
1	0	0	↶ 0
2	0	10	↱ 0
488	0	613	→ 2
0	0	1	↴ 0
AM	NOON	PM	

WESTBOUND — Alamo St

	PM	NOON	AM
0 ↰	19	0	9
2 ←	435	0	668
0 ↶	1	0	0
0 ↶	0	0	0
⇨	627	0	491
	PM	NOON	AM

NORTHBOUND — Residential

PM	2	0	0	1	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

Turning movements (red): ↲ 0, ↓ 1, ↳ 0, ↳ 0 ⇧ ↶ 0, ← 0, ↑ 1, ↱ 0 ⇩

CONTROL

No Control

	AM	NOON	PM
TEV	1175	0	1104
PHF	0.79		0.93

National Data & Surveying Services Intersection Turning Movement Count

Location: Western Dwy Bellwood Shopping Center & Alamo St
City: Simi Valley
Control: No Control

Project ID: 18-05149-014
Date: 3/6/2018

Total

NS/EW Streets:	Residential				Western Dwy Bellwood Shopping Center				Alamo St				Alamo St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	1	0	1	0	0	0	0	60	0	0	0	89	0	0	151
7:15 AM	0	0	0	0	0	0	0	0	0	80	0	0	0	118	0	0	198
7:30 AM	0	0	0	0	0	0	1	0	0	171	0	0	0	206	1	0	379
7:45 AM	0	0	0	0	0	0	0	0	0	143	0	0	0	212	0	0	355
8:00 AM	0	0	0	0	0	0	0	0	0	96	0	0	0	140	0	0	236
8:15 AM	0	0	0	0	0	0	0	0	1	87	0	0	0	104	0	0	192
8:30 AM	0	0	0	0	0	0	2	0	0	97	0	0	0	186	2	0	287
8:45 AM	0	0	0	0	0	0	0	0	0	106	0	0	0	213	0	0	319
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	1	0	1	0	3	0	1	840	0	0	0	1268	3	0	2117
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	25.00%	0.00%	75.00%	0.00%	0.12%	99.88%	0.00%	0.00%	0.00%	99.76%	0.24%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	490	0	0	0	676	1	0	1168
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.716	0.000	0.000	0.000	0.797	0.250	0.000	0.770
					0.250				0.716				0.798				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	1	0	1	0	0	145	0	1	0	89	2	0	239
4:15 PM	0	0	0	0	1	0	0	0	0	108	0	0	0	112	0	0	221
4:30 PM	0	0	0	0	1	0	0	0	0	134	0	0	0	109	0	0	244
4:45 PM	0	0	0	0	0	0	0	0	0	128	0	0	0	105	1	0	234
5:00 PM	0	0	0	0	2	0	1	0	0	159	0	0	0	97	0	0	259
5:15 PM	1	0	1	0	2	0	0	0	1	153	0	0	0	104	0	0	262
5:30 PM	0	0	0	0	1	0	1	0	0	149	0	0	0	119	1	0	271
5:45 PM	0	0	0	0	0	0	1	0	0	165	0	0	0	130	0	0	296
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	1	0	8	0	4	0	1	1141	0	1	0	865	4	0	2026
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%	66.67%	0.00%	33.33%	0.00%	0.09%	99.83%	0.00%	0.09%	0.00%	99.54%	0.46%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	1	0	5	0	3	0	1	626	0	0	0	450	1	0	1088
PEAK HR FACTOR :	0.250	0.000	0.250	0.000	0.625	0.000	0.750	0.000	0.250	0.948	0.000	0.000	0.000	0.865	0.250	0.000	0.919
			0.250				0.667			0.950				0.867			

Prepared by National Data & Surveying Services

Western Dwy Bellwood Shopping Center & Alamo St

Peak Hour Turning Movement Count

ID: 18-05149-014
City: Simi Valley

Day: Tuesday
Date: 03/06/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Western Dwy Bellwood Shopping Center

AM	1	0	0	0	1	AM
NOON	0	0	0	0	0	NOON
PM	3	0	5	0	2	PM
	0	1	0	0		

EASTBOUND — Alamo St

AM	NOON	PM	
677	0	454	
0	0	0	0
0	0	1	0
490	0	626	2
0	0	0	0

WESTBOUND — Alamo St

	PM	NOON	AM
0	1	0	1
2	450	0	676
0	0	0	0
0	0	0	0
	632	0	490

NORTHBOUND — Residential

PM	0	0	1	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
		0	0	1	0	

CONTROL

No Control

	AM	NOON	PM
TEV	1168	0	1088
PHF	0.77		0.92

LSA

Bellwood Shopping Center Driveway Volumes

AM Peak Hour			
	Driveway	**Inbound**	**Outbound**
1	Northern Driveway on Tapo	3	0
2	Southern Driveway on Tapo	5	3
3	Eastern Driveway on Alamo	0	1
4	Middle Driveway on Alamo	12	7
5	Western Driveway on Alamo	1	1
TOTAL		**21**	**12**
PM Peak Hour			
	Driveway	**Inbound**	**Outbound**
1	Northern Driveway on Tapo	7	8
2	Southern Driveway on Tapo	20	16
3	Eastern Driveway on Alamo	0	5
4	Middle Driveway on Alamo	30	23
5	Western Driveway on Alamo	2	8
TOTAL		**59**	**60**

Note: Surveys were conducted at all driveways on March 6, 2018.

APPENDIX B

SIMI VALLEY TRAFFIC ANALYSIS FUTURE (2030) VOLUMES

Final 2030 Post-processed AM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Rocky Peak Fire Rd & SR-118 WB Ramps	2	6	0	0	4	1	0	0	0	147	0	3
2	Rocky Peak Fire Rd & SR-118 EB Ramps	0	270	277	17	128	0	4	1	1	0	0	0
3	Kuehner Dr & Smith Rd	0	216	24	54	456	0	0	0	0	11	0	42
4	Kuehner Dr & Katherine Rd	27	215	4	2	413	124	261	11	108	12	3	5
5	Kuehner Dr & Los Angeles Ave	241	463	0	0	294	265	184	0	286	0	0	0
6	Kuehner Dr & SR-118 EB Ramps	0	603	412	75	343	0	57	0	315	0	0	0
7	Kuehner Dr & SR-118 WB Ramps	617	29	0	0	64	41	0	0	0	351	0	15
8	Yosemite Ave & Evening Sky Dr	4	181	58	12	191	4	5	1	9	251	2	44
9	Yosemite Ave & Alamo St	402	290	0	0	719	219	58	0	324	0	0	0
10	Yosemite Ave & SR-118 WB Ramps	0	401	423	0	1,087	0	0	0	0	144	0	415
11	Yosemite Ave & SR-118 EB Ramps	0	1,111	0	0	549	511	110	0	284	0	0	0
12	Yosemite Ave & Cochran St	110	824	13	52	416	190	368	49	121	32	59	147
13	Yosemite Ave & Los Angeles Ave	141	306	93	288	116	139	157	437	63	70	551	302
14	Stow St & Cochran St	130	29	45	36	71	111	162	482	195	60	262	15
15	Stow St & Los Angeles Ave	207	110	52	111	110	265	107	1,155	151	20	815	140
16	Stearns St & Alamo St	339	40	50	10	68	72	39	291	420	171	481	6
17	Stearns St & SR-118 WB Ramps	6	254	412	0	787	14	2	0	41	286	75	208
18	Stearns St & SR-118 EB Ramps	0	1,084	9	31	556	373	70	6	228	14	0	23
19	Stearns St & Cochran St	134	659	168	305	343	241	312	512	132	48	298	252
20	Stearns St & Los Angeles Ave	16	21	6	174	26	297	373	643	14	1	893	212
21	Los Angeles Ave & Hidden Ranch Dr	207	0	245	6	2	6	22	1,010	60	126	1,337	49
22	Los Angeles Ave & Ralston Ave	0	0	0	23	0	91	28	1,183	0	0	1,476	36
23	Kadota St & Cochran St	0	0	0	48	0	89	44	681	2	1	665	13
24	Kadota St & Alamo St	8	22	6	79	33	51	42	688	34	16	685	78
25	Tapo St & Walnut St	17	81	30	7	153	11	11	13	43	100	22	12
26	Tapo St & Alamo St	121	358	43	313	497	325	109	314	186	67	459	239
27	Tapo St & Cochran St	122	283	103	235	464	230	213	412	112	187	358	124
28	Tapo St & Los Angeles Ave	37	68	37	200	124	379	421	803	81	122	1,174	222
29	Tapo Canyon Rd & Royal Ave	33	41	0	175	243	399	656	33	110	1	8	12
30	Tapo Canyon Rd & Los Angeles Ave	15	257	311	315	386	138	186	547	16	200	992	145
31	Tapo Canyon Rd & Cochran St	56	546	100	243	1,067	318	491	501	103	74	361	334
32	Tapo Canyon Rd & SR-118 EB Ramps	0	1,331	33	8	965	590	345	7	360	0	0	9
33	Tapo Canyon Rd & SR-118 WB Ramps	87	611	509	0	859	602	20	0	119	672	53	378
34	Tapo Canyon Rd & Alamo St	153	235	124	47	543	106	79	260	315	317	315	63
35	Tapo Canyon Rd & Township Ave	32	277	140	33	575	44	38	143	71	193	111	9
36	Tapo Canyon Rd & Lost Canyons Dr	127	132	0	0	634	30	44	0	89	0	0	0
37	Sequoia Ave & Alamo St	112	35	127	63	199	212	50	563	75	105	537	16
38	Sequoia Ave & Cochran St	198	233	323	181	350	74	51	646	123	172	480	116
39	Sequoia Ave & Los Angeles Ave	120	413	73	117	302	411	221	828	50	120	1,058	119
40	Sequoia Ave & Royal Ave	118	338	217	26	193	246	213	498	29	99	294	8
41	Cochran St & Galena Ave	113	96	83	109	92	191	152	621	35	60	687	86
42	Sycamore Dr & Alamo St	115	793	325	80	320	124	137	293	246	532	538	245
43	Sycamore Dr & SR-118 WB Ramps	0	977	503	3	1,086	0	0	0	0	342	0	193
44	Sycamore Dr & SR-118 EB Ramps	0	1,532	38	115	647	304	450	75	276	12	1	52
45	Sycamore Dr & Cochran St	160	871	101	216	410	341	456	437	77	133	477	219
46	Sycamore Dr & Los Angeles Ave	74	699	92	184	452	199	280	523	20	167	867	351
47	Sycamore Dr & Royal Ave	192	394	110	126	262	252	297	748	62	124	830	102
48	Sycamore Dr & Fitzgerald Rd	0	0	0	101	0	240	287	171	0	0	252	338
49	Erringer Rd & Fitzgerald Rd	91	301	107	184	164	159	231	222	8	100	239	170
50	Erringer Rd & Royal Ave	108	599	45	105	569	409	402	654	50	81	779	194
51	Erringer Rd & Patricia Ave	155	1,264	69	44	1,169	53	60	11	79	31	8	39
52	Erringer Rd & Los Angeles Ave	200	765	72	121	652	263	266	469	207	142	678	104
53	Erringer Rd & Cochran St	152	826	78	106	852	256	371	334	101	198	474	247
54	Erringer Rd & SR-118 EB Ramps	0	1,341	9	8	887	274	81	1	205	12	3	9
55	Erringer Rd & SR-118 WB Ramps	82	548	399	0	947	510	112	0	134	408	69	108
56	Erringer Rd & Alamo St	12	430	266	170	418	1	0	13	27	634	1	296
57	Los Angeles Ave & Hubbard St	60	0	33	0	0	0	48	1,151	26	29	1,323	41
58	Los Angeles Ave & Patricia Ave	186	34	28	106	13	142	264	1,027	86	49	1,638	182
59	First St & SR-118 WB Ramps	150	669	455	0	575	257	16	0	155	809	132	122
60	First St & SR-118 EB Ramps	0	1,821	0	0	1,078	110	306	0	278	0	0	0
61	First St & Cochran St	242	1,477	260	52	959	244	90	181	102	357	498	101
62	First St & E Easy St	182	1,431	102	229	1,275	296	94	27	54	43	73	250
63	First St & Los Angeles Ave	161	765	233	307	563	386	635	634	33	299	1,027	420
64	First St & Royal Ave	402	853	210	424	410	304	270	765	206	98	1,047	360
65	First St & Fitzgerald Rd	0	1,109	362	178	371	0	0	0	0	223	0	334
66	Sinaloa Rd & Los Angeles Ave	210	59	369	36	50	16	5	775	127	155	1,483	22
67	Sinaloa Rd & Royal Ave	231	253	94	112	123	203	93	659	132	102	1,194	244
68	Viewline Dr & SR-118 WB Ramps	32	0	1,132	0	0	0	0	50	34	299	53	0
69	Madera Rd & Viewline Dr	298	471	0	0	207	52	4	0	1,205	0	0	0
70	Madera Rd & SR-118 EB Ramps	0	325	854	0	1,269	46	171	0	238	0	0	0
71	Madera Rd & Cochran St	445	838	301	118	1,092	437	201	91	206	438	283	131
72	Madera Rd & Easy St	136	1,398	218	105	1,228	246	116	39	85	67	79	69
73	Madera Rd & Los Angeles Ave/Tierra Rejada Rd	248	946	258	74	563	256	383	416	39	489	885	205
74	Madera Rd & Royal Ave	2	1,073	464	308	1,272	17	37	59	11	999	23	389
75	Tierra Rejada Rd & Stargaze Pl	25	0	127	86	0	18	10	917	1	48	915	35
76	Madera Rd & Country Club Dr East	39	3	427	18	7	21	4	1,025	28	126	2,146	2
77	Wood Ranch Parkway & Madera Rd	269	5	351	39	8	4	3	1,102	61	147	2,488	5
78	Wood Ranch Parkway & Country Club Dr West	39	247	106	102	184	10	173	138	33	723	420	161
79	Wood Ranch Parkway & Long Canyon Rd	0	0	0	473	0	14	27	30	0	0	5	752
80	Madera Rd & Presidential Dr	0	0	0	22	0	41	21	1,132	0	0	2,744	10
81	Madera Rd & Country Club Dr West	555	0	25	0	0	0	57	1,222	135	49	2,501	0

Final 2030 Post-processed PM Peak Hour Volumes

#	Intersection	Northbound			Southbound			Eastbound			Westbound		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
1	Rocky Peak Fire Rd & SR-118 WB Ramps	3	0	0	0	0	1	0	0	0	422	0	3
2	Rocky Peak Fire Rd & SR-118 EB Ramps	0	0	387	3	420	0	890	1	1	0	0	0
3	Kuehner Dr & Smith Rd	0	622	9	73	418	0	0	0	0	54	0	54
4	Kuehner Dr & Katherine Rd	198	434	11	3	322	111	78	5	97	13	11	6
5	Kuehner Dr & Los Angeles Ave	403	344	0	0	303	848	648	0	397	0	0	0
6	Kuehner Dr & SR-118 EB Ramps	0	472	627	116	881	0	13	0	431	0	0	0
7	Kuehner Dr & SR-118 WB Ramps	453	41	0	0	57	18	0	0	0	960	0	51
8	Yosemite Ave & Evening Sky Dr	11	141	204	17	106	0	1	0	6	130	2	13
9	Yosemite Ave & Alamo St	248	570	0	0	290	108	182	0	259	0	0	0
10	Yosemite Ave & SR-118 WB Ramps	0	417	230	0	573	0	0	0	0	488	0	625
11	Yosemite Ave & SR-118 EB Ramps	0	813	0	0	625	205	190	0	325	0	0	0
12	Yosemite Ave & Cochran St	94	639	38	101	666	152	174	60	148	13	35	85
13	Yosemite Ave & Los Angeles Ave	127	140	50	291	193	214	349	1,129	153	100	1,141	213
14	Stow St & Cochran St	91	41	63	19	19	34	49	269	82	47	200	43
15	Stow St & Los Angeles Ave	107	51	37	52	48	68	78	1,794	144	50	1,470	84
16	Stearns St & Alamo St	437	88	96	1	38	39	56	408	417	88	192	6
17	Stearns St & SR-118 WB Ramps	31	446	244	0	402	156	6	0	79	560	143	319
18	Stearns St & SR-118 EB Ramps	0	1,079	7	27	591	445	79	1	230	11	0	19
19	Stearns St & Cochran St	72	260	161	440	466	157	72	513	48	192	555	276
20	Stearns St & Los Angeles Ave	46	23	3	206	54	340	363	1,554	53	1	1,486	130
21	Los Angeles Ave & Hidden Ranch Dr	237	6	146	56	5	82	69	2,083	133	269	1,715	82
22	Los Angeles Ave & Ralston Ave	0	0	0	16	0	60	75	2,227	0	0	1,876	50
23	Kadota St & Cochran St	0	3	0	15	0	102	67	829	4	0	442	17
24	Kadota St & Alamo St	14	30	26	45	16	33	62	834	47	11	534	86
25	Tapo St & Walnut St	30	164	98	16	122	11	14	37	22	102	39	17
26	Tapo St & Alamo St	191	291	120	72	201	114	162	633	209	112	363	97
27	Tapo St & Cochran St	262	464	256	129	323	124	153	527	166	182	364	96
28	Tapo St & Los Angeles Ave	133	138	205	209	60	391	446	1,608	89	99	1,592	297
29	Tapo Canyon Rd & Royal Ave	131	303	0	86	89	559	758	3	78	5	89	158
30	Tapo Canyon Rd & Los Angeles Ave	53	506	571	213	229	183	270	1,226	12	363	1,185	171
31	Tapo Canyon Rd & Cochran St	118	787	73	517	718	558	471	674	82	98	599	391
32	Tapo Canyon Rd & SR-118 EB Ramps	0	1,765	42	4	1,165	574	573	4	489	0	0	34
33	Tapo Canyon Rd & SR-118 WB Ramps	84	879	361	0	733	14	22	0	181	474	95	410
34	Tapo Canyon Rd & Alamo St	206	639	401	162	524	171	229	507	260	265	471	119
35	Tapo Canyon Rd & Township Ave	92	518	123	6	318	24	38	71	56	75	87	10
36	Tapo Canyon Rd & Lost Canyons Dr	139	560	0	0	328	39	27	0	168	0	0	0
37	Sequoia Ave & Alamo St	174	183	170	38	131	143	220	803	185	167	678	29
38	Sequoia Ave & Cochran St	207	380	156	122	311	102	144	1,044	277	188	806	165
39	Sequoia Ave & Los Angeles Ave	106	318	76	174	321	292	403	1,389	168	126	1,290	199
40	Sequoia Ave & Royal Ave	69	244	232	31	417	250	217	905	45	350	719	52
41	Cochran St & Galena Ave	84	58	66	190	90	316	273	1,163	94	84	848	132
42	Sycamore Dr & Alamo St	196	759	469	326	882	380	283	487	138	397	534	190
43	Sycamore Dr & SR-118 WB Ramps	0	944	379	0	1,434	0	0	0	0	765	0	207
44	Sycamore Dr & SR-118 EB Ramps	0	912	52	236	1,075	450	367	110	382	45	2	303
45	Sycamore Dr & Cochran St	160	508	170	527	675	303	274	695	74	347	685	254
46	Sycamore Dr & Los Angeles Ave	68	486	159	263	500	219	297	1,088	38	113	888	246
47	Sycamore Dr & Royal Ave	91	345	196	199	339	154	256	880	133	185	688	111
48	Sycamore Dr & Fitzgerald Rd	0	0	0	272	0	287	211	158	0	0	99	231
49	Erringer Rd & Fitzgerald Rd	22	155	55	96	244	112	89	210	52	85	164	84
50	Erringer Rd & Royal Ave	66	323	37	173	484	310	350	927	83	46	539	141
51	Erringer Rd & Patricia Ave	80	948	72	127	1,021	146	106	13	94	65	23	100
52	Erringer Rd & Los Angeles Ave	290	587	167	172	742	419	328	1,438	295	185	845	38
53	Erringer Rd & Cochran St	150	687	122	193	978	230	329	689	178	211	413	134
54	Erringer Rd & SR-118 EB Ramps	0	1,034	1	4	949	190	222	10	223	4	0	1
55	Erringer Rd & SR-118 WB Ramps	223	725	207	0	826	478	280	0	275	662	174	177
56	Erringer Rd & Alamo St	19	309	870	132	342	0	0	3	13	817	12	165
57	Los Angeles Ave & Hubbard St	80	4	53	0	0	0	31	2,125	76	77	1,727	13
58	Los Angeles Ave & Patricia Ave	234	66	51	402	66	405	361	1,987	156	98	1,397	333
59	First St & SR-118 WB Ramps	63	1,208	237	0	1,240	430	20	0	467	1,058	53	216
60	First St & SR-118 EB Ramps	0	2,056	0	0	1,825	456	403	0	284	0	0	0
61	First St & Cochran St	320	1,564	461	114	1,629	297	342	631	369	284	299	97
62	First St & E Easy St	105	1,608	233	415	1,869	127	359	105	212	101	45	501
63	First St & Los Angeles Ave	103	476	352	744	789	751	908	1,394	70	357	1,375	372
64	First St & Royal Ave	247	481	165	383	888	236	328	1,004	261	115	832	295
65	First St & Fitzgerald Rd	0	646	168	290	837	0	0	0	0	177	0	200
66	Sinaloa Rd & Los Angeles Ave	194	16	133	103	25	10	34	1,807	169	294	1,360	70
67	Sinaloa Rd & Royal Ave	111	125	98	99	223	111	145	1,420	183	100	816	148
68	Viewline Dr & SR-118 WB Ramps	0	0	1,046	0	0	0	0	45	35	515	26	0
69	Madera Rd & Viewline Dr	375	360	0	0	527	160	77	0	988	0	0	0
70	Madera Rd & SR-118 EB Ramps	0	610	1,955	0	1,104	279	61	0	208	0	0	0
71	Madera Rd & Cochran St	561	1,484	655	145	662	516	790	488	716	400	379	263
72	Madera Rd & Easy St	132	2,036	126	60	1,578	119	458	138	388	250	61	200
73	Madera Rd & Los Angeles Ave/Tierra Rejada Rd	338	1,088	560	429	1,055	318	481	696	321	606	723	113
74	Madera Rd & Royal Ave	14	1,745	1,211	563	1,416	37	26	29	9	635	24	313
75	Tierra Rejada Rd & Stargaze Pl	2	0	34	52	0	12	12	1,538	13	98	1,073	53
76	Madera Rd & Country Club Dr East	15	5	335	13	6	12	24	2,848	25	364	1,927	20
77	Wood Ranch Parkway & Madera Rd	53	15	14	102	5	217	1	2,642	133	356	1,729	16
78	Wood Ranch Parkway & Country Club Dr West	15	196	574	257	128	47	45	278	124	141	196	119
79	Wood Ranch Parkway & Long Canyon Rd	0	0	0	460	0	18	8	10	0	0	13	355
80	Madera Rd & Presidential Dr	0	0	0	29	0	22	85	2,838	0	0	1,922	43
81	Madera Rd & Country Club Dr West	215	0	58	0	0	0	0	2,283	809	104	1,653	0

APPENDIX C

ICU LEVEL OF SERVICE WORKSHEETS

Alamo Street Mixed Use (AMG1801)
Existing AM

Scenario Report

Scenario:	01 Existing AM
Command:	01 E AM
Volume:	01 E AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Existing AM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.431	A	xxxxx	0.431	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	A	xxxxx	0.457	A	xxxxx	0.457	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	A	xxxxx	0.454	A	xxxxx	0.454	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.473	A	xxxxx	0.473	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.420	A	xxxxx	0.420	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.449	A	xxxxx	0.449	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.389	A	xxxxx	0.389	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.428	A	xxxxx	0.428	+ 0.000

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Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0 1	1	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	231	428	171		71	537	149		144	258	205		375	474	47	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	231	428	171		71	537	149		144	258	205		375	474	47	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	231	428	171		71	537	149		144	258	205		375	474	47	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	231	428	171		71	537	149		144	258	205		375	474	47	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	231	428	171		71	537	149		144	258	205		375	474	47	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.12	0.10		0.04	0.15	0.08		0.04	0.07	0.11		0.10	0.13	0.03	
Crit Moves:	****					****					****		****			

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.457
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	2	1 0	1	0	0	0 1	1	1	0	0 1
Volume Module:																
Base Vol:	57	585	323		0	1041	14		7	0	96		588	47	295	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	57	585	323		0	1041	14		7	0	96		588	47	295	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	57	585	323		0	1041	14		7	0	96		588	47	295	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	57	585	323		0	1041	14		7	0	96		588	47	295	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	57	585	323		0	1041	14		7	0	96		588	47	295	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.96	0.04		1.00	0.00	1.00		1.85	0.15	1.00	
Final Sat.:	1800	3600	1800		0	5328	72		1800	0	1800		3334	266	1800	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.16	0.18		0.00	0.20	0.20		0.00	0.00	0.05		0.18	0.18	0.16	
Crit Moves:	****					****					****			****		

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.454
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	0	1	1	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1172	35	7	868	385	334	4	322	0	0	45				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1172	35	7	868	385	334	4	322	0	0	45				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1172	35	7	868	0	334	4	322	0	0	45				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1172	35	7	868	0	334	4	322	0	0	45				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1172	35	7	868	0	334	4	322	0	0	45				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.91	0.09	0.02	1.98	1.00	0.99	0.01	1.00	0.00	0.00	1.00				
Final Sat.:	0	5243	157	29	3571	1800	1779	21	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22	0.00	0.24	0.00	0.19	0.19	0.18	0.00	0.00	0.03				
Crit Moves:	****				****		****					****				

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.473
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	116	298	42	212	359	290	115	238	122	76	407	185				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	116	298	42	212	359	290	115	238	122	76	407	185				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	116	298	42	212	359	290	115	238	122	76	407	185				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	116	298	42	212	359	290	115	238	122	76	407	185				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	116	298	42	212	359	290	115	238	122	76	407	185				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.75	0.25	1.00	1.11	0.89	1.00	1.32	0.68	1.00	1.38	0.62				
Final Sat.:	1800	3155	445	1800	1991	1609	1800	2380	1220	1800	2475	1125				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.09	0.09	0.12	0.18	0.18	0.06	0.10	0.10	0.04	0.16	0.16				
Crit Moves:	****				****		****					****				

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.420
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	76	279	82		152	361	193		170	337	112		133	336	129	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	76	279	82		152	361	193		170	337	112		133	336	129	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	76	279	82		152	361	193		170	337	112		133	336	129	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	76	279	82		152	361	193		170	337	112		133	336	129	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	76	279	82		152	361	193		170	337	112		133	336	129	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.55	0.45		1.00	1.30	0.70		1.00	1.50	0.50		1.00	1.45	0.55	
Final Sat.:	1800	2782	818		1800	2346	1254		1800	2702	898		1800	2601	999	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.10	0.10		0.08	0.15	0.15		0.09	0.12	0.12		0.07	0.13	0.13	
Crit Moves:	****					****			****					****		

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.449
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	383	16	31		1	46	38		14	280	515		56	312	1	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	383	16	31		1	46	38		14	280	515		56	312	1	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	383	16	31		1	46	38		14	280	515		56	312	1	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	383	16	31		1	46	38		14	280	515		56	312	1	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	383	16	31		1	46	38		14	280	515		56	312	1	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.92	0.08	1.00		0.04	1.96	1.00		1.00	1.00	1.00		1.00	1.99	0.01	
Final Sat.:	3456	144	1800		77	3523	1800		1800	1800	1800		1800	3588	12	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.11	0.02		0.01	0.01	0.02		0.01	0.16	0.29		0.03	0.09	0.09	
Crit Moves:		****					****				****		****			

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.389
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	24	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	1	1 0	1	0	0	0 1	1	0	0	1 0
Volume Module:																
Base Vol:	26	280	335	0	533	6	9	0	87	278	81	157				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	26	280	335	0	533	6	9	0	87	278	81	157				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	26	280	335	0	533	6	9	0	87	278	81	157				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	26	280	335	0	533	6	9	0	87	278	81	157				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	26	280	335	0	533	6	9	0	87	278	81	157				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	0.00	1.98	0.02	1.00	0.00	1.00	1.00	0.34	0.66				
Final Sat.:	1800	3600	1800	0	3560	40	1800	0	1800	1800	613	1187				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.08	0.19	0.00	0.15	0.15	0.01	0.00	0.05	0.15	0.13	0.13				
Crit Moves:			****	****					****	****						

Alamo Street Mixed Use (AMG1801)
Existing AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.428
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	0 1	1	0	2	0 1	0	1	0	0 1	0	1	0	1 0
Volume Module:																
Base Vol:	0	956	4	29	489	393	43	19	260	4	1	20				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	956	4	29	489	393	43	19	260	4	1	20				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	956	4	29	489	393	43	19	260	4	1	20				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	956	4	29	489	393	43	19	260	4	1	20				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	956	4	29	489	393	43	19	260	4	1	20				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.00	1.00	1.00	2.00	1.00	0.69	0.31	1.00	0.32	0.68	1.00				
Final Sat.:	0	3600	1800	1800	3600	1800	1248	552	1800	576	1224	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.27	0.00	0.02	0.14	0.22	0.02	0.03	0.14	0.00	0.00	0.01				
Crit Moves:		****		****					****	****						

Alamo Street Mixed Use (AMG1801)
Existing PM

Scenario Report

Scenario:	01 Existing PM
Command:	01 E PM
Volume:	01 E PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Existing PM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.434	A	xxxxx	0.434	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	B	xxxxx	0.626	B	xxxxx	0.626	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	A	xxxxx	0.520	A	xxxxx	0.520	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.388	A	xxxxx	0.388	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.485	A	xxxxx	0.485	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.328	A	xxxxx	0.328	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.372	A	xxxxx	0.372	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.422	A	xxxxx	0.422	+ 0.000

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Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.434
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0 1	1	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	276	562	334		99	385	131		158	454	197		243	346	66	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	276	562	334		99	385	131		158	454	197		243	346	66	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	276	562	334		99	385	131		158	454	197		243	346	66	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	276	562	334		99	385	131		158	454	197		243	346	66	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	276	562	334		99	385	131		158	454	197		243	346	66	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.16	0.19		0.06	0.11	0.07		0.04	0.13	0.11		0.07	0.10	0.04	
Crit Moves:			****		****					****			****			

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	2	1 0	1	0	0	0 1	1	1	0	0 1
Volume Module:																
Base Vol:	144	761	325		0	910	19		27	0	217		620	91	457	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	144	761	325		0	910	19		27	0	217		620	91	457	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	144	761	325		0	910	19		27	0	217		620	91	457	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	144	761	325		0	910	19		27	0	217		620	91	457	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	144	761	325		0	910	19		27	0	217		620	91	457	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.94	0.06		1.00	0.00	1.00		1.74	0.26	1.00	
Final Sat.:	1800	3600	1800		0	5290	110		1800	0	1800		3139	461	1800	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.18		0.00	0.17	0.17		0.02	0.00	0.12		0.20	0.20	0.25	
Crit Moves:	****					****					****				****	

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.520
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	0	1	1	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1307	28	8	985	304	399	2	264	0	0	40				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1307	28	8	985	304	399	2	264	0	0	40				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1307	28	8	985	0	399	2	264	0	0	40				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1307	28	8	985	0	399	2	264	0	0	40				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1307	28	8	985	0	399	2	264	0	0	40				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.94	0.06	0.02	1.98	1.00	0.99	0.01	1.00	0.00	0.00	1.00				
Final Sat.:	0	5287	113	29	3571	1800	1791	9	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.25	0.25	0.00	0.28	0.00	0.22	0.22	0.15	0.00	0.00	0.02				
Crit Moves:	****				****		****					****				

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.388
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	179	220	85	75	169	127	168	457	178	54	305	86				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	179	220	85	75	169	127	168	457	178	54	305	86				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	179	220	85	75	169	127	168	457	178	54	305	86				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	179	220	85	75	169	127	168	457	178	54	305	86				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	179	220	85	75	169	127	168	457	178	54	305	86				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.44	0.56	1.00	1.14	0.86	1.00	1.44	0.56	1.00	1.56	0.44				
Final Sat.:	1800	2597	1003	1800	2055	1545	1800	2591	1009	1800	2808	792				
Capacity Analysis Module:																
Vol/Sat:	0.10	0.08	0.08	0.04	0.08	0.08	0.09	0.18	0.18	0.03	0.11	0.11				
Crit Moves:	****				****			****		****						

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.485
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	217	360	155		90	305	115		135	471	184		119	320	76	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	217	360	155		90	305	115		135	471	184		119	320	76	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	217	360	155		90	305	115		135	471	184		119	320	76	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	217	360	155		90	305	115		135	471	184		119	320	76	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	217	360	155		90	305	115		135	471	184		119	320	76	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.40	0.60		1.00	1.45	0.55		1.00	1.44	0.56		1.00	1.62	0.38	
Final Sat.:	1800	2517	1083		1800	2614	986		1800	2589	1011		1800	2909	691	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.14	0.14		0.05	0.12	0.12		0.08	0.18	0.18		0.07	0.11	0.11	
Crit Moves:	****					****				****			****			

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.328
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	384	43	73		1	25	28		39	223	322		26	158	2	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	384	43	73		1	25	28		39	223	322		26	158	2	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	384	43	73		1	25	28		39	223	322		26	158	2	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	384	43	73		1	25	28		39	223	322		26	158	2	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	384	43	73		1	25	28		39	223	322		26	158	2	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.80	0.20	1.00		0.08	1.92	1.00		1.00	1.00	1.00		1.00	1.98	0.02	
Final Sat.:	3237	363	1800		138	3462	1800		1800	1800	1800		1800	3555	45	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.12	0.04		0.01	0.01	0.02		0.02	0.12	0.18		0.01	0.04	0.04	
Crit Moves:		****					****				****		****			

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.372
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	1	1 0	1	0	0	0 1	1	0	0	1 0
Volume Module:																
Base Vol:	24	358	222	0	343	12	11	0	56	391	113	238				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	24	358	222	0	343	12	11	0	56	391	113	238				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	24	358	222	0	343	12	11	0	56	391	113	238				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	24	358	222	0	343	12	11	0	56	391	113	238				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	24	358	222	0	343	12	11	0	56	391	113	238				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	0.00	1.93	0.07	1.00	0.00	1.00	1.00	0.32	0.68				
Final Sat.:	1800	3600	1800	0	3478	122	1800	0	1800	1800	579	1221				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.10	0.12	0.00	0.10	0.10	0.01	0.00	0.03	0.22	0.19	0.20				
Crit Moves:			****	****					****	****						

Alamo Street Mixed Use (AMG1801)
Existing PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.422
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	0 1	1	0	2	0 1	0	1	0	0 1	0	1	0	1 0
Volume Module:																
Base Vol:	0	770	7	53	597	162	131	41	315	7	1	34				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	770	7	53	597	162	131	41	315	7	1	34				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	770	7	53	597	162	131	41	315	7	1	34				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	770	7	53	597	162	131	41	315	7	1	34				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	770	7	53	597	162	131	41	315	7	1	34				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.00	1.00	1.00	2.00	1.00	0.76	0.24	1.00	0.33	0.67	1.00				
Final Sat.:	0	3600	1800	1800	3600	1800	1371	429	1800	600	1200	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.21	0.00	0.03	0.17	0.09	0.07	0.10	0.17	0.00	0.00	0.02				
Crit Moves:		****		****					****	****						

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Scenario Report

Scenario:	02 Existing Plus Project AM
Command:	02 E+P AM
Volume:	02 E+P AM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.441	A	xxxxx	0.441	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	A	xxxxx	0.463	A	xxxxx	0.463	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	A	xxxxx	0.460	A	xxxxx	0.460	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.512	A	xxxxx	0.512	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.422	A	xxxxx	0.422	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.486	A	xxxxx	0.486	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.389	A	xxxxx	0.389	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.431	A	xxxxx	0.431	+ 0.000

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.441
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0 1	1	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	231	428	188		79	537	149		144	268	205		409	484	52	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	231	428	188		79	537	149		144	268	205		409	484	52	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	231	428	188		79	537	149		144	268	205		409	484	52	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	231	428	188		79	537	149		144	268	205		409	484	52	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	231	428	188		79	537	149		144	268	205		409	484	52	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.12	0.10		0.04	0.15	0.08		0.04	0.07	0.11		0.11	0.13	0.03	
Crit Moves:	****					****					****		****			

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	2	1 0	1	0	0	0 1	1	1	0	0 1
Volume Module:																
Base Vol:	57	602	323		0	1075	14		7	0	96		588	47	295	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	57	602	323		0	1075	14		7	0	96		588	47	295	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	57	602	323		0	1075	14		7	0	96		588	47	295	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	57	602	323		0	1075	14		7	0	96		588	47	295	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	57	602	323		0	1075	14		7	0	96		588	47	295	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.96	0.04		1.00	0.00	1.00		1.85	0.15	1.00	
Final Sat.:	1800	3600	1800		0	5331	69		1800	0	1800		3334	266	1800	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.17	0.18		0.00	0.20	0.20		0.00	0.00	0.05		0.18	0.18	0.16	
Crit Moves:	****					****					****			****		

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.460
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	0	1	1	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1180	35	7	873	385	343	4	322	0	0	45				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1180	35	7	873	385	343	4	322	0	0	45				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1180	35	7	873	0	343	4	322	0	0	45				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1180	35	7	873	0	343	4	322	0	0	45				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1180	35	7	873	0	343	4	322	0	0	45				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.91	0.09	0.02	1.98	1.00	0.99	0.01	1.00	0.00	0.00	1.00				
Final Sat.:	0	5244	156	29	3571	1800	1779	21	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.23	0.22	0.00	0.24	0.00	0.19	0.19	0.18	0.00	0.00	0.03				
Crit Moves:	****				****		****					****				

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.512
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	116	308	42	231	364	328	146	241	122	81	417	210				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	116	308	42	231	364	328	146	241	122	81	417	210				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	116	308	42	231	364	328	146	241	122	81	417	210				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	116	308	42	231	364	328	146	241	122	81	417	210				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	116	308	42	231	364	328	146	241	122	81	417	210				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.76	0.24	1.00	1.05	0.95	1.00	1.33	0.67	1.00	1.33	0.67				
Final Sat.:	1800	3168	432	1800	1894	1706	1800	2390	1210	1800	2394	1206				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.10	0.10	0.13	0.19	0.19	0.08	0.10	0.10	0.05	0.17	0.17				
Crit Moves:	****				****		****					****				

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.422
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	76	289	82		152	371	193		170	337	112		133	336	129	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	76	289	82		152	371	193		170	337	112		133	336	129	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	76	289	82		152	371	193		170	337	112		133	336	129	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	76	289	82		152	371	193		170	337	112		133	336	129	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	76	289	82		152	371	193		170	337	112		133	336	129	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.56	0.44		1.00	1.32	0.68		1.00	1.50	0.50		1.00	1.45	0.55	
Final Sat.:	1800	2804	796		1800	2368	1232		1800	2702	898		1800	2601	999	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.10	0.10	0.08	0.16	0.16	0.09	0.12	0.12	0.07	0.13	0.13				
Crit Moves:	****				****		****				****					

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.486
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	407	16	31		1	46	38		14	282	569		56	316	1	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	407	16	31		1	46	38		14	282	569		56	316	1	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	407	16	31		1	46	38		14	282	569		56	316	1	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	407	16	31		1	46	38		14	282	569		56	316	1	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	407	16	31		1	46	38		14	282	569		56	316	1	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.92	0.08	1.00		0.04	1.96	1.00		1.00	1.00	1.00		1.00	1.99	0.01	
Final Sat.:	3464	136	1800		77	3523	1800		1800	1800	1800		1800	3589	11	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.12	0.02	0.01	0.01	0.02	0.01	0.16	0.32	0.03	0.09	0.09				
Crit Moves:		****				****			****	****						

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.389
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	1	1	0	1	0	0	1	1	0	0	1	0
Volume Module:																
Base Vol:	26	288	335		0	587	6		9	0	87		278	81	173	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	26	288	335		0	587	6		9	0	87		278	81	173	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	26	288	335		0	587	6		9	0	87		278	81	173	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	26	288	335		0	587	6		9	0	87		278	81	173	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	26	288	335		0	587	6		9	0	87		278	81	173	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	1.98	0.02		1.00	0.00	1.00		1.00	0.32	0.68	
Final Sat.:	1800	3600	1800		0	3564	36		1800	0	1800		1800	574	1226	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.08	0.19		0.00	0.16	0.16		0.01	0.00	0.05		0.15	0.14	0.14	
Crit Moves:			****		****						****		****			

Alamo Street Mixed Use (AMG1801)
Existing with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.431
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	2	0	1	1	0	2	0	1	0	0	1	0	1	0	1	0
Volume Module:																
Base Vol:	0	964	4		29	494	442		43	19	260		4	1	20	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	964	4		29	494	442		43	19	260		4	1	20	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	964	4		29	494	442		43	19	260		4	1	20	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	964	4		29	494	442		43	19	260		4	1	20	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	964	4		29	494	442		43	19	260		4	1	20	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	2.00	1.00		1.00	2.00	1.00		0.69	0.31	1.00		0.32	0.68	1.00	
Final Sat.:	0	3600	1800		1800	3600	1800		1248	552	1800		576	1224	1800	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.27	0.00		0.02	0.14	0.25		0.02	0.03	0.14		0.00	0.00	0.01	
Crit Moves:		****			****						****		****			

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Scenario Report

Scenario:	02 Existing Plus Project PM
Command:	02 E+P PM
Volume:	02 E+P PM
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.453	A	xxxxx	0.453	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	B	xxxxx	0.629	B	xxxxx	0.629	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	A	xxxxx	0.535	A	xxxxx	0.535	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.397	A	xxxxx	0.397	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.486	A	xxxxx	0.486	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.356	A	xxxxx	0.356	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.368	A	xxxxx	0.368	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.422	A	xxxxx	0.422	+ 0.000

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.453
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0 1	1	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	276	562	361		97	385	131		158	457	197		258	347	64	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	276	562	361		97	385	131		158	457	197		258	347	64	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	276	562	361		97	385	131		158	457	197		258	347	64	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	276	562	361		97	385	131		158	457	197		258	347	64	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	276	562	361		97	385	131		158	457	197		258	347	64	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.16	0.20		0.05	0.11	0.07		0.04	0.13	0.11		0.07	0.10	0.04	
Crit Moves:			****		****					****			****			

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.629
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	2	1 0	1	0	0	0 1	1	1	0	0 1
Volume Module:																
Base Vol:	144	788	325		0	925	19		27	0	217		620	91	457	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	144	788	325		0	925	19		27	0	217		620	91	457	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	144	788	325		0	925	19		27	0	217		620	91	457	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	144	788	325		0	925	19		27	0	217		620	91	457	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	144	788	325		0	925	19		27	0	217		620	91	457	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.94	0.06		1.00	0.00	1.00		1.74	0.26	1.00	
Final Sat.:	1800	3600	1800		0	5291	109		1800	0	1800		3139	461	1800	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.22	0.18		0.00	0.17	0.17		0.02	0.00	0.12		0.20	0.20	0.25	
Crit Moves:	****					****					****				****	

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.535
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	0	1	1	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1305	28		8	983	304		428	2	264		0	0	40	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	1305	28		8	983	304		428	2	264		0	0	40	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	1305	28		8	983	0		428	2	264		0	0	40	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	1305	28		8	983	0		428	2	264		0	0	40	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	1305	28		8	983	0		428	2	264		0	0	40	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	2.94	0.06		0.02	1.98	1.00		0.99	0.01	1.00		0.00	0.00	1.00	
Final Sat.:	0	5287	113		29	3571	1800		1792	8	1800		0	0	1800	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.25	0.25		0.00	0.28	0.00		0.24	0.24	0.15		0.00	0.00	0.02	
Crit Moves:	****					****			****						****	

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.397
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	179	223	85		73	167	137		186	467	178		57	311	85	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	179	223	85		73	167	137		186	467	178		57	311	85	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	179	223	85		73	167	137		186	467	178		57	311	85	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	179	223	85		73	167	137		186	467	178		57	311	85	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	179	223	85		73	167	137		186	467	178		57	311	85	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.45	0.55		1.00	1.10	0.90		1.00	1.45	0.55		1.00	1.57	0.43	
Final Sat.:	1800	2606	994		1800	1978	1622		1800	2607	993		1800	2827	773	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.09	0.09		0.04	0.08	0.08		0.10	0.18	0.18		0.03	0.11	0.11	
Crit Moves:	****					****			****						****	

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.486
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	217	363	155		90	306	115		135	471	184		119	320	76	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	217	363	155		90	306	115		135	471	184		119	320	76	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	217	363	155		90	306	115		135	471	184		119	320	76	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	217	363	155		90	306	115		135	471	184		119	320	76	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	217	363	155		90	306	115		135	471	184		119	320	76	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.40	0.60		1.00	1.45	0.55		1.00	1.44	0.56		1.00	1.62	0.38	
Final Sat.:	1800	2523	1077		1800	2617	983		1800	2589	1011		1800	2909	691	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.14	0.14		0.05	0.12	0.12		0.08	0.18	0.18		0.07	0.11	0.11	
Crit Moves:	****					****				****			****			

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.356
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	431	43	73		1	25	28		39	222	349		26	157	2	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	431	43	73		1	25	28		39	222	349		26	157	2	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	431	43	73		1	25	28		39	222	349		26	157	2	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	431	43	73		1	25	28		39	222	349		26	157	2	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	431	43	73		1	25	28		39	222	349		26	157	2	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.82	0.18	1.00		0.08	1.92	1.00		1.00	1.00	1.00		1.00	1.97	0.03	
Final Sat.:	3273	327	1800		138	3462	1800		1800	1800	1800		1800	3555	45	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.13	0.04		0.01	0.01	0.02		0.02	0.12	0.19		0.01	0.04	0.04	
Crit Moves:	****						****				****		****			

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.368
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	23	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	1	1 0	1	0	0	0 1	1	0	0	1 0
Volume Module:																
Base Vol:	24	356	222	0	370	12	11	0	56	391	113	287				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	24	356	222	0	370	12	11	0	56	391	113	287				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	24	356	222	0	370	12	11	0	56	391	113	287				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	24	356	222	0	370	12	11	0	56	391	113	287				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	24	356	222	0	370	12	11	0	56	391	113	287				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	0.00	1.94	0.06	1.00	0.00	1.00	1.00	0.28	0.72				
Final Sat.:	1800	3600	1800	0	3487	113	1800	0	1800	1800	509	1292				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.10	0.12	0.00	0.11	0.11	0.01	0.00	0.03	0.22	0.22	0.22				
Crit Moves:	****				****				****	****						

Alamo Street Mixed Use (AMG1801)
Existing with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.422
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	0 1	1	0	2	0 1	0	1	0	0 1	0	1	0	1 0
Volume Module:																
Base Vol:	0	768	7	53	595	191	131	41	315	7	1	34				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	768	7	53	595	191	131	41	315	7	1	34				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	768	7	53	595	191	131	41	315	7	1	34				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	768	7	53	595	191	131	41	315	7	1	34				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	768	7	53	595	191	131	41	315	7	1	34				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.00	1.00	1.00	2.00	1.00	0.76	0.24	1.00	0.33	0.67	1.00				
Final Sat.:	0	3600	1800	1800	3600	1800	1371	429	1800	600	1200	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.21	0.00	0.03	0.17	0.11	0.07	0.10	0.17	0.00	0.00	0.02				
Crit Moves:		****		****					****	****						

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Scenario Report

Scenario:	03 Future (2030) without Project AM
Command:	03 F-P AM
Volume:	03 F-P AM
Geometry:	Future
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.447	A	xxxxx	0.447	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	B	xxxxx	0.659	B	xxxxx	0.659	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	A	xxxxx	0.467	A	xxxxx	0.467	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.511	A	xxxxx	0.511	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.510	A	xxxxx	0.510	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.437	A	xxxxx	0.437	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.378	A	xxxxx	0.378	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.353	A	xxxxx	0.353	+ 0.000

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.447
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0 1	1	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	153	235	107		39	543	106		79	250	315		283	305	58	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	153	235	107		39	543	106		79	250	315		283	305	58	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	153	235	107		39	543	106		79	250	315		283	305	58	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	153	235	107		39	543	106		79	250	315		283	305	58	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	153	235	107		39	543	106		79	250	315		283	305	58	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.07	0.06		0.02	0.15	0.06		0.02	0.07	0.17		0.08	0.08	0.03	
Crit Moves:	****					****					****		****			

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	2	1 0	1	0	0	0 1	1	1	0	0 1
Volume Module:																
Base Vol:	87	594	509		0	825	602		20	0	119		672	53	378	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	87	594	509		0	825	602		20	0	119		672	53	378	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	87	594	509		0	825	602		20	0	119		672	53	378	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	87	594	509		0	825	602		20	0	119		672	53	378	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	87	594	509		0	825	602		20	0	119		672	53	378	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.00	1.00		1.00	0.00	1.00		1.85	0.15	1.00	
Final Sat.:	1800	3600	1800		0	3600	1800		1800	0	1800		3337	263	1800	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.17	0.28		0.00	0.23	0.33		0.01	0.00	0.07		0.20	0.20	0.21	
Crit Moves:	****						****				****				****	

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.467
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1323	33	8	960	590	336	7	360	0	0	9				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1323	33	8	960	590	336	7	360	0	0	9				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1323	33	8	960	0	336	7	360	0	0	9				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1323	33	8	960	0	336	7	360	0	0	9				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1323	33	8	960	0	336	7	360	0	0	9				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.93	0.07	1.00	2.00	1.00	0.98	0.02	1.00	0.00	0.00	1.00				
Final Sat.:	0	5269	131	1800	3600	1800	1763	37	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.25	0.25	0.00	0.27	0.00	0.19	0.19	0.20	0.00	0.00	0.01				
Crit Moves:	****				****				****	****						

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.511
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	121	348	43	294	492	287	78	311	186	62	449	214				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	121	348	43	294	492	287	78	311	186	62	449	214				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	121	348	43	294	492	287	78	311	186	62	449	214				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	121	348	43	294	492	287	78	311	186	62	449	214				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	121	348	43	294	492	287	78	311	186	62	449	214				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.78	0.22	1.00	1.26	0.74	1.00	1.25	0.75	1.00	1.35	0.65				
Final Sat.:	1800	3204	396	1800	2274	1326	1800	2253	1347	1800	2438	1162				
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.11	0.16	0.22	0.22	0.04	0.14	0.14	0.03	0.18	0.18				
Crit Moves:	****				****		****				****					

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.510
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	122	273	103		235	454	230		213	412	112		187	358	124	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	122	273	103		235	454	230		213	412	112		187	358	124	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	122	273	103		235	454	230		213	412	112		187	358	124	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	122	273	103		235	454	230		213	412	112		187	358	124	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	122	273	103		235	454	230		213	412	112		187	358	124	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.45	0.55		1.00	1.33	0.67		1.00	1.57	0.43		1.00	1.49	0.51	
Final Sat.:	1800	2614	986		1800	2389	1211		1800	2831	769		1800	2674	926	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.10	0.10		0.13	0.19	0.19		0.12	0.15	0.15		0.10	0.13	0.13	
Crit Moves:	****					****			****					****		

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.437
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	315	40	50		10	68	72		39	289	366		171	477	6	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	315	40	50		10	68	72		39	289	366		171	477	6	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	315	40	50		10	68	72		39	289	366		171	477	6	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	315	40	50		10	68	72		39	289	366		171	477	6	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	315	40	50		10	68	72		39	289	366		171	477	6	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.77	0.23	1.00		0.26	1.74	1.00		1.00	1.00	1.00		1.00	1.98	0.02	
Final Sat.:	3194	406	1800		462	3138	1800		1800	1800	1800		1800	3555	45	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.10	0.03		0.02	0.02	0.04		0.02	0.16	0.20		0.10	0.13	0.13	
Crit Moves:		****					****				****		****			

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.378
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	1	1 0	1	0	0	0 1	2	0	0	1 0
Volume Module:																
Base Vol:	6	246	412	0	733	14	2	0	41	286	75	192				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	6	246	412	0	733	14	2	0	41	286	75	192				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	6	246	412	0	733	14	2	0	41	286	75	192				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	6	246	412	0	733	14	2	0	41	286	75	192				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	6	246	412	0	733	14	2	0	41	286	75	192				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	0.00	1.96	0.04	1.00	0.00	1.00	2.00	0.28	0.72				
Final Sat.:	1800	3600	1800	0	3533	67	1800	0	1800	3600	506	1294				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.07	0.23	0.00	0.21	0.21	0.00	0.00	0.02	0.08	0.15	0.15				
Crit Moves:			****	****			****				****					

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.353
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	1	0	0	0 1
Volume Module:																
Base Vol:	0	1076	9	31	551	324	70	6	228	14	0	23				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1076	9	31	551	324	70	6	228	14	0	23				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1076	9	31	551	324	70	6	228	14	0	23				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1076	9	31	551	324	70	6	228	14	0	23				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1076	9	31	551	324	70	6	228	14	0	23				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.98	0.02	1.00	2.00	1.00	0.92	0.08	1.00	1.00	0.00	1.00				
Final Sat.:	0	5355	45	1800	3600	1800	1658	142	1800	1800	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.20	0.20	0.02	0.15	0.18	0.04	0.04	0.13	0.01	0.00	0.01				
Crit Moves:		****		****					****	****						

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Scenario Report

Scenario:	03 Future (2030) without Project PM
Command:	03 F-P PM
Volume:	03 F-P PM
Geometry:	Future
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.508	A	xxxxx	0.508	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	A	xxxxx	0.565	A	xxxxx	0.565	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	B	xxxxx	0.658	B	xxxxx	0.658	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.483	A	xxxxx	0.483	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.563	A	xxxxx	0.563	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.431	A	xxxxx	0.431	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.398	A	xxxxx	0.398	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.365	A	xxxxx	0.365	+ 0.000

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.508
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0	1	1	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Volume Module:												
Base Vol:	206	639	374	164	524	171	229	504	260	250	470	121
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	206	639	374	164	524	171	229	504	260	250	470	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	206	639	374	164	524	171	229	504	260	250	470	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	206	639	374	164	524	171	229	504	260	250	470	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	206	639	374	164	524	171	229	504	260	250	470	121
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3600	3600	1800	1800	3600	1800	3600	3600	1800	3600	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.06	0.18	0.21	0.09	0.15	0.10	0.06	0.14	0.14	0.07	0.13	0.07
Crit Moves:			****	****				****		****		

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.565
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	0	2	1	0	1	0	0	1	1	1	0	0	1
Volume Module:												
Base Vol:	84	852	361	0	718	14	22	0	181	474	95	410
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	84	852	361	0	718	14	22	0	181	474	95	410
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	84	852	361	0	718	14	22	0	181	474	95	410
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	852	361	0	718	14	22	0	181	474	95	410
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	852	361	0	718	14	22	0	181	474	95	410
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	0.00	2.94	0.06	1.00	0.00	1.00	1.67	0.33	1.00
Final Sat.:	1800	3600	1800	0	5297	103	1800	0	1800	2999	601	1800
Capacity Analysis Module:												
Vol/Sat:	0.05	0.24	0.20	0.00	0.14	0.14	0.01	0.00	0.10	0.16	0.16	0.23
Crit Moves:		****		****					****			****

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.658
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1767	42	4	1167	574	544	4	489	0	0	34				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1767	42	4	1167	574	544	4	489	0	0	34				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1767	42	4	1167	0	544	4	489	0	0	34				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1767	42	4	1167	0	544	4	489	0	0	34				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1767	42	4	1167	0	544	4	489	0	0	34				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.93	0.07	1.00	2.00	1.00	0.99	0.01	1.00	0.00	0.00	1.00				
Final Sat.:	0	5275	125	1800	3600	1800	1787	13	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.33	0.34	0.00	0.32	0.00	0.30	0.30	0.27	0.00	0.00	0.02				
Crit Moves:			****	****			****					****				

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.483
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	191	288	120	74	203	104	144	623	209	109	357	98				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	191	288	120	74	203	104	144	623	209	109	357	98				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	191	288	120	74	203	104	144	623	209	109	357	98				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	191	288	120	74	203	104	144	623	209	109	357	98				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	191	288	120	74	203	104	144	623	209	109	357	98				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.41	0.59	1.00	1.32	0.68	1.00	1.50	0.50	1.00	1.57	0.43				
Final Sat.:	1800	2541	1059	1800	2380	1220	1800	2696	904	1800	2825	775				
Capacity Analysis Module:																
Vol/Sat:	0.11	0.11	0.11	0.04	0.09	0.09	0.08	0.23	0.23	0.06	0.13	0.13				
Crit Moves:	****				****			****		****						

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.563
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	262	461	256		129	322	124		153	527	166		182	364	96	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	262	461	256		129	322	124		153	527	166		182	364	96	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	262	461	256		129	322	124		153	527	166		182	364	96	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	262	461	256		129	322	124		153	527	166		182	364	96	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	262	461	256		129	322	124		153	527	166		182	364	96	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.29	0.71		1.00	1.44	0.56		1.00	1.52	0.48		1.00	1.58	0.42	
Final Sat.:	1800	2315	1285		1800	2599	1001		1800	2738	862		1800	2849	751	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.20	0.20	0.07	0.12	0.12	0.09	0.19	0.19	0.10	0.13	0.13				
Crit Moves:	****				****			****		****						

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	390	88	96		1	38	39		56	409	390		88	193	6	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	390	88	96		1	38	39		56	409	390		88	193	6	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	390	88	96		1	38	39		56	409	390		88	193	6	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	390	88	96		1	38	39		56	409	390		88	193	6	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	390	88	96		1	38	39		56	409	390		88	193	6	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.63	0.37	1.00		0.05	1.95	1.00		1.00	1.00	1.00		1.00	1.94	0.06	
Final Sat.:	2937	663	1800		92	3508	1800		1800	1800	1800		1800	3491	109	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.13	0.05	0.01	0.01	0.02	0.03	0.23	0.22	0.05	0.06	0.06				
Crit Moves:	****					****			****		****					

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.398
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	1	1	0	1	0	0	1	2	0	0	1	0
Volume Module:																		
Base Vol:	31	448	244		0	375	156		6	0	79		560	143	270			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	31	448	244		0	375	156		6	0	79		560	143	270			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	31	448	244		0	375	156		6	0	79		560	143	270			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	31	448	244		0	375	156		6	0	79		560	143	270			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	31	448	244		0	375	156		6	0	79		560	143	270			
Saturation Flow Module:																		
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800			
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	1.00	2.00	1.00		0.00	1.41	0.59		1.00	0.00	1.00		2.00	0.35	0.65			
Final Sat.:	1800	3600	1800		0	2542	1058		1800	0	1800		3600	623	1177			
Capacity Analysis Module:																		
Vol/Sat:	0.02	0.12	0.14		0.00	0.15	0.15		0.00	0.00	0.04		0.16	0.23	0.23			
Crit Moves:	****					****			****					****				

Alamo Street Mixed Use (AMG1801)
Future (2030) without Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.365
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	2	1	0	1	0	2	0	1	0	0	1	1	0	0	0	1
Volume Module:																		
Base Vol:	0	1081	7		27	593	416		79	1	230		11	0	19			
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Initial Bse:	0	1081	7		27	593	416		79	1	230		11	0	19			
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
PHF Volume:	0	1081	7		27	593	416		79	1	230		11	0	19			
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0			
Reduced Vol:	0	1081	7		27	593	416		79	1	230		11	0	19			
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
FinalVolume:	0	1081	7		27	593	416		79	1	230		11	0	19			
Saturation Flow Module:																		
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800			
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00			
Lanes:	0.00	2.98	0.02		1.00	2.00	1.00		0.99	0.01	1.00		1.00	0.00	1.00			
Final Sat.:	0	5365	35		1800	3600	1800		1778	23	1800		1800	0	1800			
Capacity Analysis Module:																		
Vol/Sat:	0.00	0.20	0.20		0.02	0.16	0.23		0.04	0.04	0.13		0.01	0.00	0.01			
Crit Moves:	****						****				****		****					

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Scenario Report

Scenario:	04 Future (2030) AM
Command:	04 F+P AM
Volume:	04 F+P AM
Geometry:	Future
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.456	A	xxxxx	0.456	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	B	xxxxx	0.659	B	xxxxx	0.659	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	A	xxxxx	0.464	A	xxxxx	0.464	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.550	A	xxxxx	0.550	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.513	A	xxxxx	0.513	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.474	A	xxxxx	0.474	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.387	A	xxxxx	0.387	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.354	A	xxxxx	0.354	+ 0.000

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Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.456
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	0 1	1	0	2	0 1	2	0	2	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	153	235	124		47	543	106		79	260	315		317	315	63	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	153	235	124		47	543	106		79	260	315		317	315	63	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	153	235	124		47	543	106		79	260	315		317	315	63	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	153	235	124		47	543	106		79	260	315		317	315	63	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	153	235	124		47	543	106		79	260	315		317	315	63	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.07	0.07		0.03	0.15	0.06		0.02	0.07	0.17		0.09	0.09	0.04	
Crit Moves:	****					****					****		****			

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	2	1 0	1	0	0	0 1	1	1	0	0 1
Volume Module:																
Base Vol:	87	611	509		0	859	602		20	0	119		672	53	378	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	87	611	509		0	859	602		20	0	119		672	53	378	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	87	611	509		0	859	602		20	0	119		672	53	378	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	87	611	509		0	859	602		20	0	119		672	53	378	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	87	611	509		0	859	602		20	0	119		672	53	378	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.00	1.00		1.00	0.00	1.00		1.85	0.15	1.00	
Final Sat.:	1800	3600	1800		0	3600	1800		1800	0	1800		3337	263	1800	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.17	0.28		0.00	0.24	0.33		0.01	0.00	0.07		0.20	0.20	0.21	
Crit Moves:	****						****				****				****	

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.464
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1331	33	8	965	590	345	7	360	0	0	9				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1331	33	8	965	590	345	7	360	0	0	9				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1331	33	8	965	0	345	7	360	0	0	9				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1331	33	8	965	0	345	7	360	0	0	9				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1331	33	8	965	0	345	7	360	0	0	9				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.93	0.07	1.00	2.00	1.00	0.98	0.02	1.00	0.00	0.00	1.00				
Final Sat.:	0	5269	131	1800	3600	1800	1764	36	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.25	0.25	0.00	0.27	0.00	0.19	0.20	0.20	0.00	0.00	0.01				
Crit Moves:	****				****			****		****						

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.550
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	121	358	43	313	497	325	109	314	186	67	459	239				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	121	358	43	313	497	325	109	314	186	67	459	239				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	121	358	43	313	497	325	109	314	186	67	459	239				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	121	358	43	313	497	325	109	314	186	67	459	239				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	121	358	43	313	497	325	109	314	186	67	459	239				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.79	0.21	1.00	1.21	0.79	1.00	1.26	0.74	1.00	1.32	0.68				
Final Sat.:	1800	3214	386	1800	2177	1423	1800	2261	1339	1800	2367	1233				
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.11	0.17	0.23	0.23	0.06	0.14	0.14	0.04	0.19	0.19				
Crit Moves:	****				****		****				****					

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.513
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	122	283	103		235	464	230		213	412	112		187	358	124	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	122	283	103		235	464	230		213	412	112		187	358	124	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	122	283	103		235	464	230		213	412	112		187	358	124	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	122	283	103		235	464	230		213	412	112		187	358	124	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	122	283	103		235	464	230		213	412	112		187	358	124	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.47	0.53		1.00	1.34	0.66		1.00	1.57	0.43		1.00	1.49	0.51	
Final Sat.:	1800	2639	961		1800	2407	1193		1800	2831	769		1800	2674	926	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.11		0.13	0.19	0.19		0.12	0.15	0.15		0.10	0.13	0.13	
Crit Moves:	****					****			****					****		

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.474
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	339	40	50		10	68	72		39	291	420		171	481	6	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	339	40	50		10	68	72		39	291	420		171	481	6	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	339	40	50		10	68	72		39	291	420		171	481	6	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	339	40	50		10	68	72		39	291	420		171	481	6	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	339	40	50		10	68	72		39	291	420		171	481	6	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.79	0.21	1.00		0.26	1.74	1.00		1.00	1.00	1.00		1.00	1.98	0.02	
Final Sat.:	3220	380	1800		462	3138	1800		1800	1800	1800		1800	3556	44	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.11	0.03		0.02	0.02	0.04		0.02	0.16	0.23		0.10	0.14	0.14	
Crit Moves:	****						****				****		****			

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.387
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	1	1 0	1	0	0	0 1	2	0	0	1 0
Volume Module:																
Base Vol:	6	254	412	0	787	14	2	0	41	286	75	208				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	6	254	412	0	787	14	2	0	41	286	75	208				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	6	254	412	0	787	14	2	0	41	286	75	208				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	6	254	412	0	787	14	2	0	41	286	75	208				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	6	254	412	0	787	14	2	0	41	286	75	208				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	0.00	1.97	0.03	1.00	0.00	1.00	2.00	0.27	0.73				
Final Sat.:	1800	3600	1800	0	3537	63	1800	0	1800	3600	477	1323				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.07	0.23	0.00	0.22	0.22	0.00	0.00	0.02	0.08	0.16	0.16				
Crit Moves:			****	****			****				****					

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project AM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.354
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	1	0	0	0 1
Volume Module:																
Base Vol:	0	1084	9	31	556	373	70	6	228	14	0	23				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1084	9	31	556	373	70	6	228	14	0	23				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1084	9	31	556	373	70	6	228	14	0	23				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1084	9	31	556	373	70	6	228	14	0	23				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1084	9	31	556	373	70	6	228	14	0	23				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.98	0.02	1.00	2.00	1.00	0.92	0.08	1.00	1.00	0.00	1.00				
Final Sat.:	0	5356	44	1800	3600	1800	1658	142	1800	1800	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.20	0.20	0.02	0.15	0.21	0.04	0.04	0.13	0.01	0.00	0.01				
Crit Moves:		****		****					****	****						

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Scenario Report

Scenario:	04 Future (2030) PM
Command:	04 F+P PM
Volume:	04 F+P PM
Geometry:	Future
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Tapo Canyon Rd/Alamo St	A	xxxxx	0.527	A	xxxxx	0.527	+ 0.000
# 2 Tapo Canyon Rd/SR-118 WB ramps	A	xxxxx	0.573	A	xxxxx	0.573	+ 0.000
# 3 Tapo Canyon Rd/SR-118 EB ramps	B	xxxxx	0.674	B	xxxxx	0.674	+ 0.000
# 4 Tapo St/Alamo St	A	xxxxx	0.490	A	xxxxx	0.490	+ 0.000
# 5 Tapo St/Cochran St	A	xxxxx	0.563	A	xxxxx	0.563	+ 0.000
# 6 Stearns St/Alamo St	A	xxxxx	0.443	A	xxxxx	0.443	+ 0.000
# 7 Stearns St/SR-118 WB ramps	A	xxxxx	0.432	A	xxxxx	0.432	+ 0.000
# 8 Stearns St/SR-118 EB ramps	A	xxxxx	0.381	A	xxxxx	0.381	+ 0.000

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Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Tapo Canyon Rd/Alamo St

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.527
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	2	0	1	1	0	2	0	1	2	0	2	0	1	
Volume Module:																
Base Vol:	206	639	401		162	524	171		229	507	260		265	471	119	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	206	639	401		162	524	171		229	507	260		265	471	119	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	206	639	401		162	524	171		229	507	260		265	471	119	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	206	639	401		162	524	171		229	507	260		265	471	119	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	206	639	401		162	524	171		229	507	260		265	471	119	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.00	1.00		1.00	2.00	1.00		2.00	2.00	1.00		2.00	2.00	1.00	
Final Sat.:	3600	3600	1800		1800	3600	1800		3600	3600	1800		3600	3600	1800	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.18	0.22		0.09	0.15	0.10		0.06	0.14	0.14		0.07	0.13	0.07	
Crit Moves:			****		****					****			****			

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Tapo Canyon Rd/SR-118 WB ramps

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.573
Loss Time (sec): 0 | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 | Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Prot+Permit				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	0	2	1	0	1	0	0	1	1	0
Volume Module:																
Base Vol:	84	879	361		0	733	14		22	0	181		474	95	410	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	84	879	361		0	733	14		22	0	181		474	95	410	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	84	879	361		0	733	14		22	0	181		474	95	410	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	84	879	361		0	733	14		22	0	181		474	95	410	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	84	879	361		0	733	14		22	0	181		474	95	410	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		0.00	2.94	0.06		1.00	0.00	1.00		1.67	0.33	1.00	
Final Sat.:	1800	3600	1800		0	5299	101		1800	0	1800		2999	601	1800	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.24	0.20		0.00	0.14	0.14		0.01	0.00	0.10		0.16	0.16	0.23	
Crit Moves:		****			****						****				****	

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Tapo Canyon Rd/SR-118 EB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.674
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	0	0	0	0 1
Volume Module:																
Base Vol:	0	1765	42	4	1165	574	573	4	489	0	0	34				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1765	42	4	1165	574	573	4	489	0	0	34				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1765	42	4	1165	0	573	4	489	0	0	34				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1765	42	4	1165	0	573	4	489	0	0	34				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1765	42	4	1165	0	573	4	489	0	0	34				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.93	0.07	1.00	2.00	1.00	0.99	0.01	1.00	0.00	0.00	1.00				
Final Sat.:	0	5274	126	1800	3600	1800	1788	12	1800	0	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.33	0.33	0.00	0.32	0.00	0.32	0.32	0.27	0.00	0.00	0.02				
Crit Moves:		****			****		****					****				

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.490
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	191	291	120	72	201	114	162	633	209	112	363	97				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	191	291	120	72	201	114	162	633	209	112	363	97				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	191	291	120	72	201	114	162	633	209	112	363	97				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	191	291	120	72	201	114	162	633	209	112	363	97				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	191	291	120	72	201	114	162	633	209	112	363	97				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.42	0.58	1.00	1.28	0.72	1.00	1.50	0.50	1.00	1.58	0.42				
Final Sat.:	1800	2549	1051	1800	2297	1303	1800	2706	894	1800	2841	759				
Capacity Analysis Module:																
Vol/Sat:	0.11	0.11	0.11	0.04	0.09	0.09	0.09	0.23	0.23	0.06	0.13	0.13				
Crit Moves:	****				****			****		****						

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Tapo St/Cochran St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.563
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	262	464	256		129	323	124		153	527	166		182	364	96	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	262	464	256		129	323	124		153	527	166		182	364	96	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	262	464	256		129	323	124		153	527	166		182	364	96	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	262	464	256		129	323	124		153	527	166		182	364	96	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	262	464	256		129	323	124		153	527	166		182	364	96	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.29	0.71		1.00	1.45	0.55		1.00	1.52	0.48		1.00	1.58	0.42	
Final Sat.:	1800	2320	1280		1800	2601	999		1800	2738	862		1800	2849	751	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.20	0.20		0.07	0.12	0.12		0.09	0.19	0.19		0.10	0.13	0.13	
Crit Moves:	****					****				****			****			

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Stearns St/Alamo St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.443
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	1	0	0 1	0	1	1	0 1	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	437	88	96		1	38	39		56	408	417		88	192	6	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	437	88	96		1	38	39		56	408	417		88	192	6	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	437	88	96		1	38	39		56	408	417		88	192	6	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	437	88	96		1	38	39		56	408	417		88	192	6	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	437	88	96		1	38	39		56	408	417		88	192	6	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.66	0.34	1.00		0.05	1.95	1.00		1.00	1.00	1.00		1.00	1.94	0.06	
Final Sat.:	2997	603	1800		92	3508	1800		1800	1800	1800		1800	3491	109	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.15	0.05		0.01	0.01	0.02		0.03	0.23	0.23		0.05	0.06	0.05	
Crit Moves:	****						****			****			****			

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Stearns St/SR-118 WB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.432
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	0	0	1	1 0	1	0	0	0 1	2	0	0	1 0
Volume Module:																
Base Vol:	31	446	244	0	402	156	6	0	79	560	143	319				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	31	446	244	0	402	156	6	0	79	560	143	319				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	31	446	244	0	402	156	6	0	79	560	143	319				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	31	446	244	0	402	156	6	0	79	560	143	319				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	31	446	244	0	402	156	6	0	79	560	143	319				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	0.00	1.44	0.56	1.00	0.00	1.00	2.00	0.31	0.69				
Final Sat.:	1800	3600	1800	0	2594	1006	1800	0	1800	3600	557	1243				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.12	0.14	0.00	0.15	0.16	0.00	0.00	0.04	0.16	0.26	0.26				
Crit Moves:	****					****	****				****					

Alamo Street Mixed Use (AMG1801)
Future (2030) with Project PM

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Stearns St/SR-118 EB ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.381
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	23	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	1 0	1	0	2	0 1	0	1	0	0 1	1	0	0	0 1
Volume Module:																
Base Vol:	0	1079	7	27	591	445	79	1	230	11	0	19				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	1079	7	27	591	445	79	1	230	11	0	19				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	1079	7	27	591	445	79	1	230	11	0	19				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	1079	7	27	591	445	79	1	230	11	0	19				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	1079	7	27	591	445	79	1	230	11	0	19				
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	2.98	0.02	1.00	2.00	1.00	0.99	0.01	1.00	1.00	0.00	1.00				
Final Sat.:	0	5365	35	1800	3600	1800	1778	23	1800	1800	0	1800				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.20	0.20	0.02	0.16	0.25	0.04	0.04	0.13	0.01	0.00	0.01				
Crit Moves:	****					****			****	****						

Alamo Street Mixed Use (AMG1801)
Existing Afternoon

Scenario Report

Scenario:	05 Existing Afternoon
Command:	05 E Afternoon
Volume:	05 E Afternoon
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Alamo Street Mixed Use (AMG1801)
Existing Afternoon

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Tapo St/Alamo St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.473
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	164	266	68		181	329	217		191	362	170		59	315	131	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	164	266	68		181	329	217		191	362	170		59	315	131	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	164	266	68		181	329	217		191	362	170		59	315	131	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	164	266	68		181	329	217		191	362	170		59	315	131	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	164	266	68		181	329	217		191	362	170		59	315	131	
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.59	0.41		1.00	1.21	0.79		1.00	1.36	0.64		1.00	1.41	0.59	
Final Sat.:	1800	2867	733		1800	2169	1431		1800	2450	1150		1800	2543	1057	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09		0.10	0.15	0.15		0.11	0.15	0.15		0.03	0.12	0.12	
Crit Moves:	****					****			****					****		

APPENDIX D

HCM LEVEL OF SERVICE WORKSHEETS

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	96	588	47	295	57	585	323	0	1041	14
Future Volume (veh/h)	7	0	96	588	47	295	57	585	323	0	1041	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	8	0	103	668	0	317	61	629	347	0	1119	15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	879	0	391	380	2250	1004	0	2769	37
Arrive On Green	0.00	0.00	0.00	0.25	0.00	0.25	0.06	0.63	0.63	0.00	0.53	0.53
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	5361	70
Grp Volume(v), veh/h		0.0		668	0	317	61	629	347	0	734	400
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1858
Q Serve(g_s), s				15.6	0.0	16.9	1.2	7.1	9.3	0.0	11.5	11.5
Cycle Q Clear(g_c), s				15.6	0.0	16.9	1.2	7.1	9.3	0.0	11.5	11.5
Prop In Lane				1.00		1.00	1.00		1.00	0.00		0.04
Lane Grp Cap(c), veh/h				879	0	391	380	2250	1004	0	1815	991
V/C Ratio(X)				0.76	0.00	0.81	0.16	0.28	0.35	0.00	0.40	0.40
Avail Cap(c_a), veh/h				1267	0	564	380	2250	1004	0	1815	991
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.73	0.73	0.73	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.4	0.0	31.9	8.2	7.4	7.7	0.0	12.5	12.5
Incr Delay (d2), s/veh				1.7	0.0	5.8	0.1	0.2	0.7	0.0	0.7	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.8	0.0	6.9	0.4	2.3	2.8	0.0	4.1	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.1	0.0	37.7	8.4	7.6	8.4	0.0	13.2	13.7
LnGrp LOS				C	A	D	A	A	A	A	B	B
Approach Vol, veh/h					985			1037			1134	
Approach Delay, s/veh					34.6			7.9			13.4	
Approach LOS					C			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		62.4			9.0	53.4		27.6				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		28.6			5.0	19.6		32.0				
Max Q Clear Time (g_c+I1), s		11.3			3.2	13.5		18.9				
Green Ext Time (p_c), s		5.0			0.0	3.4		3.3				

Intersection Summary		
HCM 6th Ctrl Delay		18.2
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	334	4	322	0	0	45	0	1172	35	7	868	385
Future Volume (vph)	334	4	322	0	0	45	0	1172	35	7	868	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4			5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91			0.95	1.00
Frt		1.00	0.85			0.86		1.00			1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)		1775	1583			1611		5063			3538	1583
Flt Permitted		0.95	1.00			1.00		1.00			0.94	1.00
Satd. Flow (perm)		1775	1583			1611		5063			3322	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	371	4	358	0	0	50	0	1302	39	8	964	428
RTOR Reduction (vph)	0	0	30	0	0	35	0	5	0	0	0	0
Lane Group Flow (vph)	0	375	328	0	0	15	0	1336	0	0	972	428
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		28.8	28.8			19.6		26.2			26.2	65.0
Effective Green, g (s)		28.8	28.8			19.6		26.2			26.2	65.0
Actuated g/C Ratio		0.44	0.44			0.30		0.40			0.40	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4			5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0			3.0	
Lane Grp Cap (vph)		786	701			485		2040			1339	1583
v/s Ratio Prot		c0.04						0.26				
v/s Ratio Perm		0.17	0.21			0.01					c0.29	0.27
v/c Ratio		0.48	0.47			0.03		0.66			0.73	0.27
Uniform Delay, d1		12.8	12.7			16.0		15.7			16.4	0.0
Progression Factor		1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2		0.5	0.5			0.0		1.7			3.5	0.4
Delay (s)		13.2	13.2			16.0		17.4			19.8	0.4
Level of Service		B	B			B		B			B	A
Approach Delay (s)		13.2			16.0			17.4			13.9	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	58.5%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	87	278	81	157	26	280	335	0	533	6
Future Volume (vph)	9	0	87	278	81	157	26	280	335	0	533	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.90		1.00	1.00	0.85		1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	1770	1679		1770	3539	1583		3533	
Flt Permitted	0.47		1.00	0.95	1.00		0.41	1.00	1.00		1.00	
Satd. Flow (perm)	871		1583	1770	1679		759	3539	1583		3533	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	10	0	100	320	93	180	30	322	385	0	613	7
RTOR Reduction (vph)	0	0	72	0	130	0	0	0	166	0	1	0
Lane Group Flow (vph)	10	0	28	320	143	0	30	322	219	0	619	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	18.1		18.1	18.1	18.1		36.9	36.9	36.9		36.9	
Effective Green, g (s)	18.1		18.1	18.1	18.1		36.9	36.9	36.9		36.9	
Actuated g/C Ratio	0.28		0.28	0.28	0.28		0.57	0.57	0.57		0.57	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	242		440	492	467		430	2009	898		2005	
v/s Ratio Prot					0.09			0.09			c0.18	
v/s Ratio Perm	0.01		0.02	c0.18			0.04		0.14			
v/c Ratio	0.04		0.06	0.65	0.31		0.07	0.16	0.24		0.31	
Uniform Delay, d1	17.1		17.2	20.7	18.5		6.3	6.7	7.0		7.4	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.1	3.1	0.4		0.3	0.2	0.6		0.4	
Delay (s)	17.2		17.3	23.7	18.9		6.6	6.9	7.7		7.8	
Level of Service	B		B	C	B		A	A	A		A	
Approach Delay (s)		17.3			21.5			7.3			7.8	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	19	260	4	1	20	0	956	4	29	489	393
Future Volume (veh/h)	43	19	260	4	1	20	0	956	4	29	489	393
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	20	280	4	1	22	0	1028	4	31	526	423
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	316	120	347	322	0	347	0	2183	974	370	2183	974
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.00	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	980	550	1585	1079	0	1585	0	3647	1585	547	3554	1585
Grp Volume(v), veh/h	66	0	280	4	0	22	0	1028	4	31	526	423
Grp Sat Flow(s),veh/h/ln	1530	0	1585	1079	0	1585	0	1777	1585	547	1777	1585
Q Serve(g_s), s	1.1	0.0	10.1	0.2	0.0	0.7	0.0	9.4	0.1	2.0	4.0	8.4
Cycle Q Clear(g_c), s	1.9	0.0	10.1	2.1	0.0	0.7	0.0	9.4	0.1	11.4	4.0	8.4
Prop In Lane	0.70		1.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	0	347	322	0	347	0	2183	974	370	2183	974
V/C Ratio(X)	0.15	0.00	0.81	0.01	0.00	0.06	0.00	0.47	0.00	0.08	0.24	0.43
Avail Cap(c_a), veh/h	735	0	660	535	0	660	0	2183	974	370	2183	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	19.0	0.0	22.2	19.9	0.0	18.6	0.0	6.3	4.5	9.4	5.2	6.1
Incr Delay (d2), s/veh	0.2	0.0	4.4	0.0	0.0	0.1	0.0	0.7	0.0	0.4	0.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.9	0.0	0.0	0.2	0.0	2.8	0.0	0.2	1.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	26.7	19.9	0.0	18.6	0.0	7.0	4.5	9.8	5.5	7.4
LnGrp LOS	B	A	C	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		346			26			1032			980	
Approach Delay, s/veh		25.2			18.8			7.0			6.4	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.3	17.7	42.3	17.7
Change Period (Y+Rc), s	5.4	4.6	5.4	4.6
Max Green Setting (Gmax), s	25.0	25.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	11.4	12.1	13.4	4.1
Green Ext Time (p_c), s	6.1	1.1	4.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	217	620	91	457	144	761	325	0	910	19
Future Volume (veh/h)	27	0	217	620	91	457	144	761	325	0	910	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	27	0	219	692	0	462	145	769	328	0	919	19
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	1156	0	514	380	1974	880	0	2345	48
Arrive On Green	0.00	0.00	0.00	0.32	0.00	0.32	0.06	0.56	0.56	0.00	0.46	0.46
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	5317	106
Grp Volume(v), veh/h		0.0		692	0	462	145	769	328	0	607	331
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1851
Q Serve(g_s), s				14.7	0.0	25.0	3.7	11.0	10.4	0.0	10.6	10.7
Cycle Q Clear(g_c), s				14.7	0.0	25.0	3.7	11.0	10.4	0.0	10.6	10.7
Prop In Lane				1.00		1.00	1.00		1.00	0.00		0.06
Lane Grp Cap(c), veh/h				1156	0	514	380	1974	880	0	1550	843
V/C Ratio(X)				0.60	0.00	0.90	0.38	0.39	0.37	0.00	0.39	0.39
Avail Cap(c_a), veh/h				1267	0	564	380	1974	880	0	1550	843
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.68	0.68	0.68	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.5	0.0	29.0	11.8	11.3	11.2	0.0	16.2	16.2
Incr Delay (d2), s/veh				0.7	0.0	16.3	0.4	0.4	0.8	0.0	0.7	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	11.5	1.4	3.9	3.4	0.0	4.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.1	0.0	45.3	12.3	11.7	12.0	0.0	17.0	17.6
LnGrp LOS				C	A	D	B	B	B	A	B	B
Approach Vol, veh/h					1154			1242			938	
Approach Delay, s/veh					33.8			11.9			17.2	
Approach LOS					C			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		55.4			9.0	46.4		34.6				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		28.6			5.0	19.6		32.0				
Max Q Clear Time (g_c+I1), s		13.0			5.7	12.7		27.0				
Green Ext Time (p_c), s		5.6			0.0	3.2		2.2				

Intersection Summary		
HCM 6th Ctrl Delay		21.0
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	399	2	264	0	0	40	0	1307	28	8	985	304
Future Volume (vph)	399	2	264	0	0	40	0	1307	28	8	985	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4			5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91			0.95	1.00
Frt		1.00	0.85			0.86		1.00			1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)		1774	1583			1611		5070			3538	1583
Flt Permitted		0.95	1.00			1.00		1.00			0.94	1.00
Satd. Flow (perm)		1774	1583			1611		5070			3311	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	434	2	287	0	0	43	0	1421	30	9	1071	330
RTOR Reduction (vph)	0	0	23	0	0	30	0	4	0	0	0	0
Lane Group Flow (vph)	0	436	264	0	0	13	0	1447	0	0	1080	330
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		28.1	28.1			18.9		26.9			26.9	65.0
Effective Green, g (s)		28.1	28.1			18.9		26.9			26.9	65.0
Actuated g/C Ratio		0.43	0.43			0.29		0.41			0.41	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4			5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0			3.0	
Lane Grp Cap (vph)		766	684			468		2098			1370	1583
v/s Ratio Prot		c0.05						0.29				
v/s Ratio Perm		0.20	0.17			0.01					c0.33	0.21
v/c Ratio		0.57	0.39			0.03		0.69			0.79	0.21
Uniform Delay, d1		13.9	12.6			16.5		15.6			16.6	0.0
Progression Factor		1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2		1.0	0.4			0.0		1.9			4.7	0.3
Delay (s)		14.9	12.9			16.5		17.5			21.2	0.3
Level of Service		B	B			B		B			C	A
Approach Delay (s)		14.1			16.5			17.5			16.3	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	64.4%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	56	391	113	238	24	358	222	0	343	12
Future Volume (vph)	11	0	56	391	113	238	24	358	222	0	343	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.90		1.00	1.00	0.85		1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	1770	1673		1770	3539	1583		3522	
Flt Permitted	0.39		1.00	0.95	1.00		0.53	1.00	1.00		1.00	
Satd. Flow (perm)	723		1583	1770	1673		994	3539	1583		3522	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	11	0	58	403	116	245	25	369	229	0	354	12
RTOR Reduction (vph)	0	0	39	0	139	0	0	0	112	0	3	0
Lane Group Flow (vph)	11	0	19	403	222	0	25	369	117	0	363	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	21.7		21.7	21.7	21.7		33.3	33.3	33.3		33.3	
Effective Green, g (s)	21.7		21.7	21.7	21.7		33.3	33.3	33.3		33.3	
Actuated g/C Ratio	0.33		0.33	0.33	0.33		0.51	0.51	0.51		0.51	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	241		528	590	558		509	1813	810		1804	
v/s Ratio Prot					0.13			c0.10			0.10	
v/s Ratio Perm	0.02		0.01	c0.23			0.03		0.07			
v/c Ratio	0.05		0.04	0.68	0.40		0.05	0.20	0.14		0.20	
Uniform Delay, d1	14.6		14.6	18.7	16.6		7.9	8.6	8.3		8.6	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.0	3.3	0.5		0.2	0.3	0.4		0.3	
Delay (s)	14.7		14.6	21.9	17.1		8.1	8.9	8.7		8.9	
Level of Service	B		B	C	B		A	A	A		A	
Approach Delay (s)		14.6			19.7			8.8			8.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	41	315	7	1	34	0	770	7	53	597	162
Future Volume (veh/h)	131	41	315	7	1	34	0	770	7	53	597	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	46	350	8	1	38	0	856	8	59	663	180
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	395	111	430	282	0	430	0	1998	891	391	1998	891
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.00	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1069	409	1585	988	0	1585	0	3647	1585	640	3554	1585
Grp Volume(v), veh/h	192	0	350	8	0	38	0	856	8	59	663	180
Grp Sat Flow(s),veh/h/ln	1478	0	1585	988	0	1585	0	1777	1585	640	1777	1585
Q Serve(g_s), s	5.8	0.0	12.4	0.4	0.0	1.1	0.0	8.3	0.1	3.5	6.0	3.4
Cycle Q Clear(g_c), s	6.4	0.0	12.4	6.8	0.0	1.1	0.0	8.3	0.1	11.8	6.0	3.4
Prop In Lane	0.76		1.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	506	0	430	282	0	430	0	1998	891	391	1998	891
V/C Ratio(X)	0.38	0.00	0.81	0.03	0.00	0.09	0.00	0.43	0.01	0.15	0.33	0.20
Avail Cap(c_a), veh/h	729	0	671	433	0	671	0	1998	891	391	1998	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	18.2	0.0	20.5	21.1	0.0	16.3	0.0	7.6	5.8	11.0	7.1	6.5
Incr Delay (d2), s/veh	0.5	0.0	4.4	0.0	0.0	0.1	0.0	0.7	0.0	0.7	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	4.7	0.1	0.0	0.4	0.0	2.7	0.0	0.5	1.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	0.0	24.8	21.2	0.0	16.4	0.0	8.2	5.8	11.7	7.5	6.9
LnGrp LOS	B	A	C	C	A	B	A	A	A	B	A	A
Approach Vol, veh/h		542			46			864			902	
Approach Delay, s/veh		22.7			17.2			8.2			7.6	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	39.1	20.9	39.1	20.9
Change Period (Y+Rc), s	5.4	4.6	5.4	4.6
Max Green Setting (Gmax), s	24.6	25.4	24.6	25.4
Max Q Clear Time (g_c+I1), s	10.3	14.4	13.8	8.8
Green Ext Time (p_c), s	5.2	1.9	4.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	0	96	588	47	295	57	602	323	0	1075	14
Future Volume (veh/h)	7	0	96	588	47	295	57	602	323	0	1075	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	8	0	103	668	0	317	61	647	347	0	1156	15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	879	0	391	370	2250	1004	0	2770	36
Arrive On Green	0.00	0.00	0.00	0.25	0.00	0.25	0.06	0.63	0.63	0.00	0.53	0.53
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	5363	67
Grp Volume(v), veh/h		0.0		668	0	317	61	647	347	0	757	414
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1858
Q Serve(g_s), s				15.6	0.0	16.9	1.2	7.3	9.3	0.0	12.0	12.0
Cycle Q Clear(g_c), s				15.6	0.0	16.9	1.2	7.3	9.3	0.0	12.0	12.0
Prop In Lane				1.00		1.00	1.00		1.00	0.00		0.04
Lane Grp Cap(c), veh/h				879	0	391	370	2250	1004	0	1815	991
V/C Ratio(X)				0.76	0.00	0.81	0.16	0.29	0.35	0.00	0.42	0.42
Avail Cap(c_a), veh/h				1267	0	564	370	2250	1004	0	1815	991
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.73	0.73	0.73	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.4	0.0	31.9	8.3	7.4	7.7	0.0	12.6	12.6
Incr Delay (d2), s/veh				1.7	0.0	5.8	0.2	0.2	0.7	0.0	0.7	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.8	0.0	6.9	0.4	2.4	2.8	0.0	4.2	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.1	0.0	37.7	8.5	7.6	8.4	0.0	13.3	13.9
LnGrp LOS				C	A	D	A	A	A	A	B	B
Approach Vol, veh/h					985			1055			1171	
Approach Delay, s/veh					34.6			7.9			13.5	
Approach LOS					C			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		62.4			9.0	53.4		27.6				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		28.6			5.0	19.6		32.0				
Max Q Clear Time (g_c+I1), s		11.3			3.2	14.0		18.9				
Green Ext Time (p_c), s		5.1			0.0	3.3		3.3				

Intersection Summary		
HCM 6th Ctrl Delay		18.1
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	343	4	322	0	0	45	0	1180	35	7	873	385
Future Volume (vph)	343	4	322	0	0	45	0	1180	35	7	873	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4			5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91			0.95	1.00
Frt		1.00	0.85			0.86		1.00			1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)		1775	1583			1611		5063			3538	1583
Flt Permitted		0.95	1.00			1.00		1.00			0.94	1.00
Satd. Flow (perm)		1775	1583			1611		5063			3322	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	381	4	358	0	0	50	0	1311	39	8	970	428
RTOR Reduction (vph)	0	0	30	0	0	35	0	5	0	0	0	0
Lane Group Flow (vph)	0	385	328	0	0	15	0	1345	0	0	978	428
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		28.7	28.7			19.5		26.3			26.3	65.0
Effective Green, g (s)		28.7	28.7			19.5		26.3			26.3	65.0
Actuated g/C Ratio		0.44	0.44			0.30		0.40			0.40	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4			5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0			3.0	
Lane Grp Cap (vph)		783	698			483		2048			1344	1583
v/s Ratio Prot		c0.04						0.27				
v/s Ratio Perm		0.18	0.21			0.01					c0.29	0.27
v/c Ratio		0.49	0.47			0.03		0.66			0.73	0.27
Uniform Delay, d1		12.9	12.8			16.1		15.7			16.3	0.0
Progression Factor		1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2		0.5	0.5			0.0		1.7			3.5	0.4
Delay (s)		13.4	13.3			16.1		17.4			19.8	0.4
Level of Service		B	B			B		B			B	A
Approach Delay (s)		13.4			16.1			17.4			13.9	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	59.1%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	87	278	81	173	26	288	335	0	587	6
Future Volume (vph)	9	0	87	278	81	173	26	288	335	0	587	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.90		1.00	1.00	0.85		1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	1770	1672		1770	3539	1583		3534	
Flt Permitted	0.44		1.00	0.95	1.00		0.38	1.00	1.00		1.00	
Satd. Flow (perm)	817		1583	1770	1672		699	3539	1583		3534	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	10	0	100	320	93	199	30	331	385	0	675	7
RTOR Reduction (vph)	0	0	72	0	143	0	0	0	167	0	1	0
Lane Group Flow (vph)	10	0	28	320	149	0	30	331	218	0	681	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	18.2		18.2	18.2	18.2		36.8	36.8	36.8		36.8	
Effective Green, g (s)	18.2		18.2	18.2	18.2		36.8	36.8	36.8		36.8	
Actuated g/C Ratio	0.28		0.28	0.28	0.28		0.57	0.57	0.57		0.57	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	228		443	495	468		395	2003	896		2000	
v/s Ratio Prot					0.09			0.09			c0.19	
v/s Ratio Perm	0.01		0.02	c0.18			0.04		0.14			
v/c Ratio	0.04		0.06	0.65	0.32		0.08	0.17	0.24		0.34	
Uniform Delay, d1	17.1		17.2	20.6	18.5		6.4	6.7	7.1		7.6	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.1	2.9	0.4		0.4	0.2	0.6		0.5	
Delay (s)	17.1		17.2	23.5	18.9		6.8	6.9	7.7		8.0	
Level of Service	B		B	C	B		A	A	A		A	
Approach Delay (s)		17.2			21.3			7.3			8.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	19	260	4	1	20	0	964	4	29	494	442
Future Volume (veh/h)	43	19	260	4	1	20	0	964	4	29	494	442
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	20	280	4	1	22	0	1037	4	31	531	475
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	316	120	347	322	0	347	0	2183	974	367	2183	974
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.00	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	980	550	1585	1079	0	1585	0	3647	1585	542	3554	1585
Grp Volume(v), veh/h	66	0	280	4	0	22	0	1037	4	31	531	475
Grp Sat Flow(s),veh/h/ln	1530	0	1585	1079	0	1585	0	1777	1585	542	1777	1585
Q Serve(g_s), s	1.1	0.0	10.1	0.2	0.0	0.7	0.0	9.5	0.1	2.0	4.1	9.9
Cycle Q Clear(g_c), s	1.9	0.0	10.1	2.1	0.0	0.7	0.0	9.5	0.1	11.5	4.1	9.9
Prop In Lane	0.70		1.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	0	347	322	0	347	0	2183	974	367	2183	974
V/C Ratio(X)	0.15	0.00	0.81	0.01	0.00	0.06	0.00	0.48	0.00	0.08	0.24	0.49
Avail Cap(c_a), veh/h	735	0	660	535	0	660	0	2183	974	367	2183	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	19.0	0.0	22.2	19.9	0.0	18.6	0.0	6.3	4.5	9.4	5.2	6.4
Incr Delay (d2), s/veh	0.2	0.0	4.4	0.0	0.0	0.1	0.0	0.7	0.0	0.4	0.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.9	0.0	0.0	0.2	0.0	2.8	0.0	0.2	1.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	26.7	19.9	0.0	18.6	0.0	7.0	4.5	9.8	5.5	8.0
LnGrp LOS	B	A	C	B	A	B	A	A	A	A	A	A
Approach Vol, veh/h		346			26			1041			1037	
Approach Delay, s/veh		25.2			18.8			7.0			6.8	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	42.3	17.7	42.3	17.7
Change Period (Y+Rc), s	5.4	4.6	5.4	4.6
Max Green Setting (Gmax), s	25.0	25.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	11.5	12.1	13.5	4.1
Green Ext Time (p_c), s	6.2	1.1	4.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	217	620	91	457	144	788	325	0	925	19
Future Volume (veh/h)	27	0	217	620	91	457	144	788	325	0	925	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	27	0	219	692	0	462	145	796	328	0	934	19
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	1156	0	514	376	1974	880	0	2346	48
Arrive On Green	0.00	0.00	0.00	0.32	0.00	0.32	0.06	0.56	0.56	0.00	0.46	0.46
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	5319	105
Grp Volume(v), veh/h		0.0		692	0	462	145	796	328	0	617	336
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1852
Q Serve(g_s), s				14.7	0.0	25.0	3.7	11.5	10.4	0.0	10.8	10.9
Cycle Q Clear(g_c), s				14.7	0.0	25.0	3.7	11.5	10.4	0.0	10.8	10.9
Prop In Lane				1.00		1.00	1.00		1.00	0.00		0.06
Lane Grp Cap(c), veh/h				1156	0	514	376	1974	880	0	1550	843
V/C Ratio(X)				0.60	0.00	0.90	0.39	0.40	0.37	0.00	0.40	0.40
Avail Cap(c_a), veh/h				1267	0	564	376	1974	880	0	1550	843
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.69	0.69	0.69	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.5	0.0	29.0	11.9	11.5	11.2	0.0	16.3	16.3
Incr Delay (d2), s/veh				0.7	0.0	16.3	0.4	0.4	0.8	0.0	0.8	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	11.5	1.4	4.1	3.4	0.0	4.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.1	0.0	45.3	12.3	11.9	12.0	0.0	17.1	17.7
LnGrp LOS				C	A	D	B	B	B	A	B	B
Approach Vol, veh/h					1154			1269			953	
Approach Delay, s/veh					33.8			12.0			17.3	
Approach LOS					C			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		55.4			9.0	46.4		34.6				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		28.6			5.0	19.6		32.0				
Max Q Clear Time (g_c+I1), s		13.5			5.7	12.9		27.0				
Green Ext Time (p_c), s		5.6			0.0	3.1		2.2				

Intersection Summary		
HCM 6th Ctrl Delay		20.9
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	428	2	264	0	0	40	0	1305	28	8	983	304
Future Volume (vph)	428	2	264	0	0	40	0	1305	28	8	983	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4			5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91			0.95	1.00
Frt		1.00	0.85			0.86		1.00			1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00			1.00	1.00
Satd. Flow (prot)		1774	1583			1611		5069			3538	1583
Flt Permitted		0.95	1.00			1.00		1.00			0.94	1.00
Satd. Flow (perm)		1774	1583			1611		5069			3311	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	465	2	287	0	0	43	0	1418	30	9	1068	330
RTOR Reduction (vph)	0	0	23	0	0	30	0	4	0	0	0	0
Lane Group Flow (vph)	0	467	264	0	0	13	0	1444	0	0	1077	330
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		28.1	28.1			18.9		26.9			26.9	65.0
Effective Green, g (s)		28.1	28.1			18.9		26.9			26.9	65.0
Actuated g/C Ratio		0.43	0.43			0.29		0.41			0.41	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4			5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0			3.0	
Lane Grp Cap (vph)		766	684			468		2097			1370	1583
v/s Ratio Prot		c0.05						0.28				
v/s Ratio Perm		0.21	0.17			0.01					c0.33	0.21
v/c Ratio		0.61	0.39			0.03		0.69			0.79	0.21
Uniform Delay, d1		14.2	12.6			16.5		15.6			16.6	0.0
Progression Factor		1.00	1.00			1.00		1.00			1.00	1.00
Incremental Delay, d2		1.4	0.4			0.0		1.9			4.6	0.3
Delay (s)		15.6	12.9			16.5		17.5			21.2	0.3
Level of Service		B	B			B		B			C	A
Approach Delay (s)		14.6			16.5			17.5			16.3	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	66.0%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	56	391	113	287	24	356	222	0	370	12
Future Volume (vph)	11	0	56	391	113	287	24	356	222	0	370	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.89		1.00	1.00	0.85		1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	1770	1662		1770	3539	1583		3523	
Flt Permitted	0.33		1.00	0.95	1.00		0.52	1.00	1.00		1.00	
Satd. Flow (perm)	613		1583	1770	1662		968	3539	1583		3523	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	11	0	58	403	116	296	25	367	229	0	381	12
RTOR Reduction (vph)	0	0	38	0	166	0	0	0	113	0	3	0
Lane Group Flow (vph)	11	0	20	403	246	0	25	367	116	0	390	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	22.1		22.1	22.1	22.1		32.9	32.9	32.9		32.9	
Effective Green, g (s)	22.1		22.1	22.1	22.1		32.9	32.9	32.9		32.9	
Actuated g/C Ratio	0.34		0.34	0.34	0.34		0.51	0.51	0.51		0.51	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	208		538	601	565		489	1791	801		1783	
v/s Ratio Prot					0.15			0.10			c0.11	
v/s Ratio Perm	0.02		0.01	c0.23			0.03		0.07			
v/c Ratio	0.05		0.04	0.67	0.44		0.05	0.20	0.14		0.22	
Uniform Delay, d1	14.4		14.3	18.3	16.6		8.1	8.8	8.6		8.9	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.0	2.9	0.5		0.2	0.3	0.4		0.3	
Delay (s)	14.5		14.4	21.3	17.2		8.3	9.1	8.9		9.2	
Level of Service	B		B	C	B		A	A	A		A	
Approach Delay (s)		14.4			19.2			9.0			9.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	41	315	7	1	34	0	768	7	53	595	191
Future Volume (veh/h)	131	41	315	7	1	34	0	768	7	53	595	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	146	46	350	8	1	38	0	853	8	59	661	212
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	395	111	430	282	0	430	0	1998	891	392	1998	891
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.00	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1069	409	1585	988	0	1585	0	3647	1585	642	3554	1585
Grp Volume(v), veh/h	192	0	350	8	0	38	0	853	8	59	661	212
Grp Sat Flow(s),veh/h/ln	1478	0	1585	988	0	1585	0	1777	1585	642	1777	1585
Q Serve(g_s), s	5.8	0.0	12.4	0.4	0.0	1.1	0.0	8.3	0.1	3.5	6.0	4.1
Cycle Q Clear(g_c), s	6.4	0.0	12.4	6.8	0.0	1.1	0.0	8.3	0.1	11.8	6.0	4.1
Prop In Lane	0.76		1.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	506	0	430	282	0	430	0	1998	891	392	1998	891
V/C Ratio(X)	0.38	0.00	0.81	0.03	0.00	0.09	0.00	0.43	0.01	0.15	0.33	0.24
Avail Cap(c_a), veh/h	729	0	671	433	0	671	0	1998	891	392	1998	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	18.2	0.0	20.5	21.1	0.0	16.3	0.0	7.6	5.8	11.0	7.1	6.6
Incr Delay (d2), s/veh	0.5	0.0	4.4	0.0	0.0	0.1	0.0	0.7	0.0	0.7	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	4.7	0.1	0.0	0.4	0.0	2.7	0.0	0.5	1.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	0.0	24.8	21.2	0.0	16.4	0.0	8.2	5.8	11.7	7.5	7.2
LnGrp LOS	B	A	C	C	A	B	A	A	A	B	A	A
Approach Vol, veh/h		542			46			861			932	
Approach Delay, s/veh		22.7			17.2			8.2			7.7	
Approach LOS		C			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	39.1	20.9	39.1	20.9
Change Period (Y+Rc), s	5.4	4.6	5.4	4.6
Max Green Setting (Gmax), s	24.6	25.4	24.6	25.4
Max Q Clear Time (g_c+I1), s	10.3	14.4	13.8	8.8
Green Ext Time (p_c), s	5.2	1.9	4.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.5
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	119	672	53	378	87	594	509	0	825	602
Future Volume (veh/h)	20	0	119	672	53	378	87	594	509	0	825	602
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	22	0	128	764	0	406	94	639	547	0	887	647
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	1031	0	459	221	2142	955	0	1745	813
Arrive On Green	0.00	0.00	0.00	0.29	0.00	0.29	0.05	0.60	0.60	0.00	0.51	0.51
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	3572	1585
Grp Volume(v), veh/h		0.0		764	0	406	94	639	547	0	887	647
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1585
Q Serve(g_s), s				19.4	0.0	24.5	2.3	8.7	20.9	0.0	17.2	33.6
Cycle Q Clear(g_c), s				19.4	0.0	24.5	2.3	8.7	20.9	0.0	17.2	33.6
Prop In Lane				1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1031	0	459	221	2142	955	0	1745	813
V/C Ratio(X)				0.74	0.00	0.89	0.43	0.30	0.57	0.00	0.51	0.80
Avail Cap(c_a), veh/h				1147	0	510	221	2142	955	0	1745	813
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.64	0.64	0.64	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.1	0.0	33.9	18.0	9.6	12.1	0.0	16.1	20.1
Incr Delay (d2), s/veh				2.3	0.0	15.8	0.8	0.2	1.6	0.0	1.1	8.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.5	0.0	11.2	0.9	3.1	6.9	0.0	6.4	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	49.7	18.8	9.9	13.7	0.0	17.1	28.0
LnGrp LOS				C	A	D	B	A	B	A	B	C
Approach Vol, veh/h					1170			1280			1534	
Approach Delay, s/veh					39.8			12.1			21.7	
Approach LOS					D			B			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.7			9.0	56.7		34.3				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		38.2			5.0	29.2		32.2				
Max Q Clear Time (g_c+I1), s		22.9			4.3	35.6		26.5				
Green Ext Time (p_c), s		5.6			0.0	0.0		2.5				

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

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	336	7	360	0	0	9	0	1323	33	8	960	590
Future Volume (vph)	336	7	360	0	0	9	0	1323	33	8	960	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4		5.4	5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91		1.00	0.95	1.00
Frt		1.00	0.85			0.86		1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1776	1583			1611		5067		1770	3539	1583
Flt Permitted		0.95	1.00			1.00		1.00		0.15	1.00	1.00
Satd. Flow (perm)		1776	1583			1611		5067		273	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	373	8	400	0	0	10	0	1470	37	9	1067	656
RTOR Reduction (vph)	0	0	23	0	0	7	0	4	0	0	0	0
Lane Group Flow (vph)	0	381	377	0	0	3	0	1503	0	9	1067	656
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		27.7	27.7			18.6		27.3		27.3	27.3	65.0
Effective Green, g (s)		27.7	27.7			18.6		27.3		27.3	27.3	65.0
Actuated g/C Ratio		0.43	0.43			0.29		0.42		0.42	0.42	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4		5.4	5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		756	674			460		2128		114	1486	1583
v/s Ratio Prot		0.04						0.30			c0.30	
v/s Ratio Perm		0.18	c0.24			0.00				0.03		c0.41
v/c Ratio		0.50	0.56			0.01		0.71		0.08	0.72	0.41
Uniform Delay, d1		13.6	14.1			16.6		15.5		11.3	15.7	0.0
Progression Factor		1.00	1.00			1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.5	1.0			0.0		2.0		1.3	3.0	0.8
Delay (s)		14.2	15.1			16.6		17.5		12.7	18.7	0.8
Level of Service		B	B			B		B		B	B	A
Approach Delay (s)		14.6			16.6			17.5			11.9	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	61.6%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	41	286	75	192	6	246	412	0	733	14
Future Volume (vph)	2	0	41	286	75	192	6	246	412	0	733	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.89		1.00	1.00	0.85		1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	3433	1662		1770	3539	1583		3529	
Flt Permitted	0.32		1.00	0.95	1.00		0.31	1.00	1.00		1.00	
Satd. Flow (perm)	604		1583	3433	1662		576	3539	1583		3529	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	2	0	47	329	86	221	7	283	474	0	843	16
RTOR Reduction (vph)	0	0	37	0	174	0	0	0	173	0	1	0
Lane Group Flow (vph)	2	0	10	329	133	0	7	283	301	0	858	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	13.7		13.7	13.7	13.7		41.3	41.3	41.3		41.3	
Effective Green, g (s)	13.7		13.7	13.7	13.7		41.3	41.3	41.3		41.3	
Actuated g/C Ratio	0.21		0.21	0.21	0.21		0.64	0.64	0.64		0.64	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	127		333	723	350		365	2248	1005		2242	
v/s Ratio Prot					0.08			0.08			c0.24	
v/s Ratio Perm	0.00		0.01	c0.10			0.01		0.19			
v/c Ratio	0.02		0.03	0.46	0.38		0.02	0.13	0.30		0.38	
Uniform Delay, d1	20.3		20.4	22.4	22.0		4.4	4.7	5.3		5.7	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0		0.0	0.5	0.7		0.1	0.1	0.8		0.5	
Delay (s)	20.4		20.4	22.8	22.7		4.5	4.8	6.1		6.2	
Level of Service	C		C	C	C		A	A	A		A	
Approach Delay (s)		20.4			22.8			5.6			6.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	6	228	14	0	23	0	1076	9	31	551	324
Future Volume (vph)	70	6	228	14	0	23	0	1076	9	31	551	324
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Lane Util. Factor		1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00	0.95		1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1780	1583	1770		1583		3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00	0.70		1.00		1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)		1780	1583	1312		1583		3539	1583	404	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	75	6	245	15	0	25	0	1157	10	33	592	348
RTOR Reduction (vph)	0	0	142	0	0	21	0	0	3	0	0	114
Lane Group Flow (vph)	0	81	103	15	0	4	0	1157	7	33	592	234
Turn Type	Perm	NA	Perm	Perm		Perm		NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4		4	8		8			2	6		6
Actuated Green, G (s)		9.7	9.7	9.7		9.7		40.3	40.3	40.3	40.3	40.3
Effective Green, g (s)		9.7	9.7	9.7		9.7		40.3	40.3	40.3	40.3	40.3
Actuated g/C Ratio		0.16	0.16	0.16		0.16		0.67	0.67	0.67	0.67	0.67
Clearance Time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		287	255	212		255		2377	1063	271	2377	1063
v/s Ratio Prot								c0.33			0.17	
v/s Ratio Perm		0.05	c0.07	0.01		0.00			0.00	0.08		0.15
v/c Ratio		0.28	0.41	0.07		0.02		0.49	0.01	0.12	0.25	0.22
Uniform Delay, d1		22.1	22.6	21.3		21.1		4.8	3.2	3.5	3.9	3.8
Progression Factor		1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5	1.1	0.1		0.0		0.7	0.0	0.9	0.3	0.5
Delay (s)		22.6	23.6	21.5		21.2		5.5	3.3	4.4	4.1	4.3
Level of Service		C	C	C		C		A	A	A	A	A
Approach Delay (s)		23.4			21.3			5.5			4.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	0	181	474	95	410	84	852	361	0	718	14
Future Volume (veh/h)	22	0	181	474	95	410	84	852	361	0	718	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	22	0	183	548	0	414	85	861	365	0	725	14
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	1060	0	472	465	2070	923	0	2488	48
Arrive On Green	0.00	0.00	0.00	0.30	0.00	0.30	0.06	0.58	0.58	0.00	0.48	0.48
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	5325	99
Grp Volume(v), veh/h		0.0		548	0	414	85	861	365	0	478	261
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1852
Q Serve(g_s), s				11.5	0.0	22.4	2.0	12.0	11.2	0.0	7.6	7.6
Cycle Q Clear(g_c), s				11.5	0.0	22.4	2.0	12.0	11.2	0.0	7.6	7.6
Prop In Lane				1.00		1.00	1.00		1.00	0.00		0.05
Lane Grp Cap(c), veh/h				1060	0	472	465	2070	923	0	1642	894
V/C Ratio(X)				0.52	0.00	0.88	0.18	0.42	0.40	0.00	0.29	0.29
Avail Cap(c_a), veh/h				1267	0	564	465	2070	923	0	1642	894
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.34	0.34	0.34	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.2	0.0	30.1	9.7	10.4	10.2	0.0	14.0	14.0
Incr Delay (d2), s/veh				0.4	0.0	13.0	0.1	0.2	0.4	0.0	0.4	0.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	9.9	0.7	4.1	3.5	0.0	2.8	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.6	0.0	43.0	9.8	10.6	10.6	0.0	14.5	14.9
LnGrp LOS				C	A	D	A	B	B	A	B	B
Approach Vol, veh/h					962			1311			739	
Approach Delay, s/veh					33.7			10.5			14.6	
Approach LOS					C			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.8			9.0	48.8		32.2				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		28.2			5.0	19.2		32.0				
Max Q Clear Time (g_c+I1), s		14.0			4.0	9.6		24.4				
Green Ext Time (p_c), s		6.0			0.0	3.1		2.4				

Intersection Summary		
HCM 6th Ctrl Delay		18.9
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	544	4	489	0	0	34	0	1767	42	4	1167	574
Future Volume (vph)	544	4	489	0	0	34	0	1767	42	4	1167	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4		5.4	5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91		1.00	0.95	1.00
Frt		1.00	0.85			0.86		1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583			1611		5067		1770	3539	1583
Flt Permitted		0.95	1.00			1.00		1.00		0.14	1.00	1.00
Satd. Flow (perm)		1775	1583			1611		5067		266	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	591	4	532	0	0	37	0	1921	46	4	1268	624
RTOR Reduction (vph)	0	0	23	0	0	27	0	4	0	0	0	0
Lane Group Flow (vph)	0	595	509	0	0	10	0	1963	0	4	1268	624
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		27.0	27.0			18.0		28.0		28.0	28.0	65.0
Effective Green, g (s)		27.0	27.0			18.0		28.0		28.0	28.0	65.0
Actuated g/C Ratio		0.42	0.42			0.28		0.43		0.43	0.43	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4		5.4	5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		737	657			446		2182		114	1524	1583
v/s Ratio Prot		c0.06						c0.39			0.36	
v/s Ratio Perm		0.27	0.32			0.01				0.02		0.39
v/c Ratio		0.81	0.77			0.02		0.90		0.04	0.83	0.39
Uniform Delay, d1		16.7	16.4			17.1		17.2		10.7	16.4	0.0
Progression Factor		1.00	1.00			1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		6.5	5.7			0.0		6.5		0.6	5.5	0.7
Delay (s)		23.2	22.0			17.1		23.7		11.3	21.9	0.7
Level of Service		C	C			B		C		B	C	A
Approach Delay (s)		22.6			17.1			23.7			14.9	
Approach LOS		C			B			C			B	

Intersection Summary				
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	81.8%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	0	79	560	143	270	31	448	244	0	375	156
Future Volume (vph)	6	0	79	560	143	270	31	448	244	0	375	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.90		1.00	1.00	0.85		0.96	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	3433	1680		1770	3539	1583		3383	
Flt Permitted	0.30		1.00	0.95	1.00		0.44	1.00	1.00		1.00	
Satd. Flow (perm)	551		1583	3433	1680		820	3539	1583		3383	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	6	0	81	577	147	278	32	462	252	0	387	161
RTOR Reduction (vph)	0	0	55	0	122	0	0	0	121	0	58	0
Lane Group Flow (vph)	6	0	26	577	303	0	32	462	131	0	490	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	21.1		21.1	21.1	21.1		33.9	33.9	33.9		33.9	
Effective Green, g (s)	21.1		21.1	21.1	21.1		33.9	33.9	33.9		33.9	
Actuated g/C Ratio	0.32		0.32	0.32	0.32		0.52	0.52	0.52		0.52	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	178		513	1114	545		427	1845	825		1764	
v/s Ratio Prot					c0.18			0.13			c0.14	
v/s Ratio Perm	0.01		0.02	0.17			0.04		0.08			
v/c Ratio	0.03		0.05	0.52	0.56		0.07	0.25	0.16		0.28	
Uniform Delay, d1	15.0		15.1	17.8	18.1		7.7	8.6	8.1		8.7	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.0	0.4	1.2		0.3	0.3	0.4		0.4	
Delay (s)	15.1		15.1	18.2	19.3		8.1	8.9	8.5		9.1	
Level of Service	B		B	B	B		A	A	A		A	
Approach Delay (s)		15.1			18.7			8.7			9.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	1	230	11	0	19	0	1081	7	27	593	416
Future Volume (vph)	79	1	230	11	0	19	0	1081	7	27	593	416
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Lane Util. Factor		1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95		1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770		1583		3539	1583	1770	3539	1583
Flt Permitted		0.95	1.00	0.70		1.00		1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)		1775	1583	1303		1583		3539	1583	371	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	1	256	12	0	21	0	1201	8	30	659	462
RTOR Reduction (vph)	0	0	112	0	0	17	0	0	3	0	0	160
Lane Group Flow (vph)	0	89	144	12	0	4	0	1201	5	30	659	302
Turn Type	Perm	NA	Perm	Perm		Perm		NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4		4	8		8			2	6		6
Actuated Green, G (s)		10.8	10.8	10.8		10.8		39.2	39.2	39.2	39.2	39.2
Effective Green, g (s)		10.8	10.8	10.8		10.8		39.2	39.2	39.2	39.2	39.2
Actuated g/C Ratio		0.18	0.18	0.18		0.18		0.65	0.65	0.65	0.65	0.65
Clearance Time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		319	284	234		284		2312	1034	242	2312	1034
v/s Ratio Prot								c0.34			0.19	
v/s Ratio Perm		0.05	c0.09	0.01		0.00			0.00	0.08		0.19
v/c Ratio		0.28	0.51	0.05		0.01		0.52	0.01	0.12	0.29	0.29
Uniform Delay, d1		21.2	22.2	20.4		20.2		5.5	3.6	3.9	4.4	4.5
Progression Factor		1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5	1.4	0.1		0.0		0.8	0.0	1.0	0.3	0.7
Delay (s)		21.7	23.6	20.5		20.2		6.3	3.6	5.0	4.7	5.2
Level of Service		C	C	C		C		A	A	A	A	A
Approach Delay (s)		23.1			20.3			6.3			4.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	119	672	53	378	87	611	509	0	859	602
Future Volume (veh/h)	20	0	119	672	53	378	87	611	509	0	859	602
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	22	0	128	764	0	406	94	657	547	0	924	647
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	1031	0	459	219	2142	955	0	1745	813
Arrive On Green	0.00	0.00	0.00	0.29	0.00	0.29	0.05	0.60	0.60	0.00	0.51	0.51
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	3572	1585
Grp Volume(v), veh/h		0.0		764	0	406	94	657	547	0	924	647
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1585
Q Serve(g_s), s				19.4	0.0	24.5	2.3	9.0	20.9	0.0	18.2	33.6
Cycle Q Clear(g_c), s				19.4	0.0	24.5	2.3	9.0	20.9	0.0	18.2	33.6
Prop In Lane				1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1031	0	459	219	2142	955	0	1745	813
V/C Ratio(X)				0.74	0.00	0.89	0.43	0.31	0.57	0.00	0.53	0.80
Avail Cap(c_a), veh/h				1147	0	510	219	2142	955	0	1745	813
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.64	0.64	0.64	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.1	0.0	33.9	18.1	9.7	12.1	0.0	16.3	20.1
Incr Delay (d2), s/veh				2.3	0.0	15.8	0.9	0.2	1.6	0.0	1.2	8.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.5	0.0	11.2	0.9	3.2	6.9	0.0	6.8	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	49.7	18.9	9.9	13.7	0.0	17.5	28.0
LnGrp LOS				C	A	D	B	A	B	A	B	C
Approach Vol, veh/h					1170			1298			1571	
Approach Delay, s/veh					39.8			12.1			21.8	
Approach LOS					D			B			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.7			9.0	56.7		34.3				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		38.2			5.0	29.2		32.2				
Max Q Clear Time (g_c+I1), s		22.9			4.3	35.6		26.5				
Green Ext Time (p_c), s		5.7			0.0	0.0		2.5				

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

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	345	7	360	0	0	9	0	1331	33	8	965	590
Future Volume (vph)	345	7	360	0	0	9	0	1331	33	8	965	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4		5.4	5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91		1.00	0.95	1.00
Frt		1.00	0.85			0.86		1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1776	1583			1611		5067		1770	3539	1583
Flt Permitted		0.95	1.00			1.00		1.00		0.15	1.00	1.00
Satd. Flow (perm)		1776	1583			1611		5067		273	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	383	8	400	0	0	10	0	1479	37	9	1072	656
RTOR Reduction (vph)	0	0	23	0	0	7	0	4	0	0	0	0
Lane Group Flow (vph)	0	391	377	0	0	3	0	1512	0	9	1072	656
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		27.7	27.7			18.6		27.3		27.3	27.3	65.0
Effective Green, g (s)		27.7	27.7			18.6		27.3		27.3	27.3	65.0
Actuated g/C Ratio		0.43	0.43			0.29		0.42		0.42	0.42	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4		5.4	5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		756	674			460		2128		114	1486	1583
v/s Ratio Prot		0.04						0.30			c0.30	
v/s Ratio Perm		0.18	c0.24			0.00				0.03		c0.41
v/c Ratio		0.52	0.56			0.01		0.71		0.08	0.72	0.41
Uniform Delay, d1		13.7	14.1			16.6		15.6		11.3	15.7	0.0
Progression Factor		1.00	1.00			1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.6	1.0			0.0		2.0		1.3	3.1	0.8
Delay (s)		14.3	15.1			16.6		17.6		12.7	18.7	0.8
Level of Service		B	B			B		B		B	B	A
Approach Delay (s)		14.7			16.6			17.6			11.9	
Approach LOS		B			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0	
Intersection Capacity Utilization	62.3%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	41	286	75	208	6	254	412	0	787	14
Future Volume (vph)	2	0	41	286	75	208	6	254	412	0	787	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.89		1.00	1.00	0.85		1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	3433	1657		1770	3539	1583		3530	
Flt Permitted	0.29		1.00	0.95	1.00		0.28	1.00	1.00		1.00	
Satd. Flow (perm)	547		1583	3433	1657		530	3539	1583		3530	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	2	0	47	329	86	239	7	292	474	0	905	16
RTOR Reduction (vph)	0	0	37	0	188	0	0	0	174	0	1	0
Lane Group Flow (vph)	2	0	10	329	137	0	7	292	300	0	920	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	13.9		13.9	13.9	13.9		41.1	41.1	41.1		41.1	
Effective Green, g (s)	13.9		13.9	13.9	13.9		41.1	41.1	41.1		41.1	
Actuated g/C Ratio	0.21		0.21	0.21	0.21		0.63	0.63	0.63		0.63	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	116		338	734	354		335	2237	1000		2232	
v/s Ratio Prot					0.08			0.08			c0.26	
v/s Ratio Perm	0.00		0.01	c0.10			0.01		0.19			
v/c Ratio	0.02		0.03	0.45	0.39		0.02	0.13	0.30		0.41	
Uniform Delay, d1	20.2		20.2	22.2	21.9		4.5	4.8	5.4		5.9	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.0	0.4	0.7		0.1	0.1	0.8		0.6	
Delay (s)	20.2		20.3	22.7	22.6		4.6	4.9	6.2		6.5	
Level of Service	C		C	C	C		A	A	A		A	
Approach Delay (s)		20.2			22.6			5.7			6.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	6	228	14	0	23	0	1084	9	31	556	373
Future Volume (vph)	70	6	228	14	0	23	0	1084	9	31	556	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Lane Util. Factor		1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00	0.95		1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1780	1583	1770		1583		3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00	0.70		1.00		1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)		1780	1583	1312		1583		3539	1583	399	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	75	6	245	15	0	25	0	1166	10	33	598	401
RTOR Reduction (vph)	0	0	138	0	0	21	0	0	3	0	0	132
Lane Group Flow (vph)	0	81	107	15	0	4	0	1166	7	33	598	269
Turn Type	Perm	NA	Perm	Perm		Perm		NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4		4	8		8			2	6		6
Actuated Green, G (s)		9.7	9.7	9.7		9.7		40.3	40.3	40.3	40.3	40.3
Effective Green, g (s)		9.7	9.7	9.7		9.7		40.3	40.3	40.3	40.3	40.3
Actuated g/C Ratio		0.16	0.16	0.16		0.16		0.67	0.67	0.67	0.67	0.67
Clearance Time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		287	255	212		255		2377	1063	267	2377	1063
v/s Ratio Prot								c0.33			0.17	
v/s Ratio Perm		0.05	c0.07	0.01		0.00			0.00	0.08		0.17
v/c Ratio		0.28	0.42	0.07		0.02		0.49	0.01	0.12	0.25	0.25
Uniform Delay, d1		22.1	22.6	21.3		21.1		4.8	3.2	3.5	3.9	3.9
Progression Factor		1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5	1.1	0.1		0.0		0.7	0.0	0.9	0.3	0.6
Delay (s)		22.6	23.7	21.5		21.2		5.6	3.3	4.5	4.1	4.5
Level of Service		C	C	C		C		A	A	A	A	A
Approach Delay (s)		23.5			21.3			5.5			4.3	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary
2: Tapo Canyon Road & Driveway & SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	0	181	474	95	410	84	879	361	0	733	14
Future Volume (veh/h)	22	0	181	474	95	410	84	879	361	0	733	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	22	0	183	548	0	414	85	888	365	0	740	14
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	1060	0	472	460	2070	923	0	2489	47
Arrive On Green	0.00	0.00	0.00	0.30	0.00	0.30	0.06	0.58	0.58	0.00	0.48	0.48
Sat Flow, veh/h		0		3563	0	1585	1781	3554	1585	0	5328	97
Grp Volume(v), veh/h		0.0		548	0	414	85	888	365	0	488	266
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1781	1777	1585	0	1702	1853
Q Serve(g_s), s				11.5	0.0	22.4	2.0	12.5	11.2	0.0	7.8	7.8
Cycle Q Clear(g_c), s				11.5	0.0	22.4	2.0	12.5	11.2	0.0	7.8	7.8
Prop In Lane				1.00		1.00	1.00		1.00	0.00		0.05
Lane Grp Cap(c), veh/h				1060	0	472	460	2070	923	0	1642	894
V/C Ratio(X)				0.52	0.00	0.88	0.18	0.43	0.40	0.00	0.30	0.30
Avail Cap(c_a), veh/h				1267	0	564	460	2070	923	0	1642	894
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.35	0.35	0.35	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.2	0.0	30.1	9.7	10.5	10.2	0.0	14.1	14.1
Incr Delay (d2), s/veh				0.4	0.0	13.0	0.1	0.2	0.4	0.0	0.5	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	9.9	0.7	4.3	3.5	0.0	2.8	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				26.6	0.0	43.0	9.8	10.7	10.6	0.0	14.5	14.9
LnGrp LOS				C	A	D	A	B	B	A	B	B
Approach Vol, veh/h					962			1338			754	
Approach Delay, s/veh					33.7			10.6			14.7	
Approach LOS					C			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.8			9.0	48.8		32.2				
Change Period (Y+Rc), s		5.4			4.0	5.4		5.4				
Max Green Setting (Gmax), s		28.2			5.0	19.2		32.0				
Max Q Clear Time (g_c+I1), s		14.5			4.0	9.8		24.4				
Green Ext Time (p_c), s		6.0			0.0	3.1		2.4				

Intersection Summary												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

HCM Signalized Intersection Capacity Analysis
3: Tapo Canyon Road & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	573	4	489	0	0	34	0	1765	42	4	1165	574
Future Volume (vph)	573	4	489	0	0	34	0	1765	42	4	1165	574
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6			4.6		5.4		5.4	5.4	4.0
Lane Util. Factor		1.00	1.00			1.00		0.91		1.00	0.95	1.00
Frt		1.00	0.85			0.86		1.00		1.00	1.00	0.85
Flt Protected		0.95	1.00			1.00		1.00		0.95	1.00	1.00
Satd. Flow (prot)		1775	1583			1611		5067		1770	3539	1583
Flt Permitted		0.95	1.00			1.00		1.00		0.14	1.00	1.00
Satd. Flow (perm)		1775	1583			1611		5067		266	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	623	4	532	0	0	37	0	1918	46	4	1266	624
RTOR Reduction (vph)	0	0	23	0	0	27	0	4	0	0	0	0
Lane Group Flow (vph)	0	627	509	0	0	10	0	1960	0	4	1266	624
Turn Type	Prot	NA	Perm			Perm		NA		Perm	NA	Free
Protected Phases	3	8						6			2	
Permitted Phases			8			4				2		Free
Actuated Green, G (s)		27.0	27.0			18.0		28.0		28.0	28.0	65.0
Effective Green, g (s)		27.0	27.0			18.0		28.0		28.0	28.0	65.0
Actuated g/C Ratio		0.42	0.42			0.28		0.43		0.43	0.43	1.00
Clearance Time (s)		4.6	4.6			4.6		5.4		5.4	5.4	
Vehicle Extension (s)		3.0	3.0			3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		737	657			446		2182		114	1524	1583
v/s Ratio Prot		c0.07						c0.39			0.36	
v/s Ratio Perm		0.29	0.32			0.01				0.02		0.39
v/c Ratio		0.85	0.77			0.02		0.90		0.04	0.83	0.39
Uniform Delay, d1		17.2	16.4			17.1		17.2		10.7	16.4	0.0
Progression Factor		1.00	1.00			1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2		9.3	5.7			0.0		6.4		0.6	5.4	0.7
Delay (s)		26.5	22.0			17.1		23.6		11.3	21.8	0.7
Level of Service		C	C			B		C		B	C	A
Approach Delay (s)		24.4			17.1			23.6			14.8	
Approach LOS		C			B			C			B	

Intersection Summary					
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.94				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	14.0		
Intersection Capacity Utilization	83.3%	ICU Level of Service	E		
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Stearns Street & Driveway/SR-118 WB Ramps

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	0	79	560	143	319	31	446	244	0	402	156
Future Volume (vph)	6	0	79	560	143	319	31	446	244	0	402	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95	1.00		0.95	
Frt	1.00		0.85	1.00	0.90		1.00	1.00	0.85		0.96	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770		1583	3433	1670		1770	3539	1583		3391	
Flt Permitted	0.25		1.00	0.95	1.00		0.42	1.00	1.00		1.00	
Satd. Flow (perm)	460		1583	3433	1670		786	3539	1583		3391	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	6	0	81	577	147	329	32	460	252	0	414	161
RTOR Reduction (vph)	0	0	54	0	142	0	0	0	124	0	53	0
Lane Group Flow (vph)	6	0	27	577	334	0	32	460	128	0	522	0
Turn Type	Perm		Perm	Perm	NA		Perm	NA	Perm		NA	
Protected Phases					8			2			6	
Permitted Phases	4		4	8			2		2			
Actuated Green, G (s)	21.9		21.9	21.9	21.9		33.1	33.1	33.1		33.1	
Effective Green, g (s)	21.9		21.9	21.9	21.9		33.1	33.1	33.1		33.1	
Actuated g/C Ratio	0.34		0.34	0.34	0.34		0.51	0.51	0.51		0.51	
Clearance Time (s)	4.6		4.6	4.6	4.6		5.4	5.4	5.4		5.4	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	154		533	1156	562		400	1802	806		1726	
v/s Ratio Prot					c0.20			0.13			c0.15	
v/s Ratio Perm	0.01		0.02	0.17			0.04		0.08			
v/c Ratio	0.04		0.05	0.50	0.59		0.08	0.26	0.16		0.30	
Uniform Delay, d1	14.5		14.5	17.2	17.9		8.2	9.0	8.5		9.3	
Progression Factor	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1		0.0	0.3	1.7		0.4	0.3	0.4		0.5	
Delay (s)	14.6		14.6	17.5	19.6		8.6	9.3	8.9		9.7	
Level of Service	B		B	B	B		A	A	A		A	
Approach Delay (s)		14.6			18.4			9.2			9.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: Stearns Street & SR-118 EB Ramps/Driveway

05/16/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	1	230	11	0	19	0	1079	7	27	591	445
Future Volume (vph)	79	1	230	11	0	19	0	1079	7	27	591	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Lane Util. Factor		1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95		1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1775	1583	1770		1583		3539	1583	1770	3539	1583
Flt Permitted		0.95	1.00	0.70		1.00		1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)		1775	1583	1303		1583		3539	1583	373	3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	1	256	12	0	21	0	1199	8	30	657	494
RTOR Reduction (vph)	0	0	112	0	0	17	0	0	3	0	0	171
Lane Group Flow (vph)	0	89	144	12	0	4	0	1199	5	30	657	323
Turn Type	Perm	NA	Perm	Perm		Perm		NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4		4	8		8			2	6		6
Actuated Green, G (s)		10.8	10.8	10.8		10.8		39.2	39.2	39.2	39.2	39.2
Effective Green, g (s)		10.8	10.8	10.8		10.8		39.2	39.2	39.2	39.2	39.2
Actuated g/C Ratio		0.18	0.18	0.18		0.18		0.65	0.65	0.65	0.65	0.65
Clearance Time (s)		4.6	4.6	4.6		4.6		5.4	5.4	5.4	5.4	5.4
Vehicle Extension (s)		3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		319	284	234		284		2312	1034	243	2312	1034
v/s Ratio Prot								c0.34			0.19	
v/s Ratio Perm		0.05	c0.09	0.01		0.00			0.00	0.08		0.20
v/c Ratio		0.28	0.51	0.05		0.01		0.52	0.01	0.12	0.28	0.31
Uniform Delay, d1		21.2	22.2	20.4		20.2		5.5	3.6	3.9	4.4	4.5
Progression Factor		1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5	1.4	0.1		0.0		0.8	0.0	1.0	0.3	0.8
Delay (s)		21.7	23.6	20.5		20.2		6.3	3.6	5.0	4.7	5.3
Level of Service		C	C	C		C		A	A	A	A	A
Approach Delay (s)		23.1			20.3			6.3			5.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX E

ALAMO STREET MIXED USE ACCESS STUDY (LSA, MARCH 2017)

BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO

March 24, 2017

Ms. Amanda Locke
AMG & Associates, LLC
16633 Ventura Boulevard, Suite 1014
Encino, California 91436

Subject: Alamo Street Mixed Use Project Access Analysis (LSA Project No. AMG1603)

Dear Ms. Locke:

LSA has prepared this traffic analysis to evaluate potential traffic issues regarding the Alamo Street Mixed Use Project (project) in the City of Simi Valley (City). The proposed project includes approximately 278 apartment dwelling units (DU) and 8,300 square feet (sf) of retail use at the northeast corner of Tapo Street/Alamo Street. The proposed project replaces the existing 77,911 sf Bellwood Shopping Center. This traffic analysis will analyze project trip generation, vehicular stacking, and the adequacy of access sight distances. LSA has prepared this analysis through discussion with City Traffic Engineering staff.

Access to the project site would be provided via three driveways: a full-access driveway and a right-in, right-out (RIRO) driveway adjacent to the retail use and the western residential gate along Tapo Street, and a full-access driveway with direct access to the eastern residential gate along Alamo Street. The site plan is shown in Figure 1 (all figures are included as Attachment A).

Trip Generation

In order to assess driveway, queuing, and stacking, project trips were developed. As the proposed project would replace the existing Bellwood Shopping Center, the project's net trip generation potential would be lessened by the existing trip generation potential that currently exists on the site. Trip rates contained in the Institution of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition, were used to calculate the potential trip generation shown in Table A.

As shown in Table A, the proposed project is forecast to generate 3,196 average daily trips (ADT), 176 a.m. peak-hour trips (49 inbound and 127 outbound), and 285 p.m. peak-hour trips (165 inbound and 120 outbound). When the trip generation potential of the existing Bellwood Shopping Center is taken into account, the proposed project is forecasted to generate a net 2,578 fewer ADT, 42 more net a.m. peak-hour trips (-34 net inbound and 76 net outbound), and 222 fewer net p.m. peak-hour trips (-78 net inbound and -144 net outbound).

Table A: Simi Valley Mixed-Use Project Trip Generation Summary

Land Use	Size	Unit	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Apartment		DU	6.65	0.10	0.41	0.51	0.40	0.22	0.62
Retail[2]									
Project Trip Generation									
Apartment	278	DU	1,849	28	114	142	111	61	172
Retail	8.300	TSF	1,347	21	13	34	54	59	113
Project Trip Generation Total			**3,196**	**49**	**127**	**176**	**165**	**120**	**285**
Bellwood Shopping Center Trip Generation									
Retail	77.911	TSF	5,774	83	51	134	243	264	507
Net Project Total			**-2,578**	**-34**	**76**	**42**	**-78**	**-144**	**-222**

[1] Trip Rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 9th Edition (2012).
[2] Identified rates are the results from the regression equations from the ITE *Trip Generation* Manual, 9th Edition (2012).
Land Use Code (820) - General Retail
Land Use Code (220) - Apartments
DU = Dwelling Unit
TSF = thousand square feet

Trip Distribution and Assignment

The regional project trip distribution and assignment for a.m. and p.m. peak hours are illustrated in Figure 2. Regional trip distribution for apartment trips was based on local travel patterns through the intersection of Tapo Street/Alamo Street. The peak hour traffic count sheet for this intersection was provided by City staff (Attachment B). The regional trip distribution for retail trips was distributed based on anticipated trip origins and destinations.

As Figure 2 shows, 10 percent of the trips are destined to the north (via Tapo Street), 29 percent are destined to the south (via Tapo Street), 26 percent are destined to the east (via Alamo Street), and 35 percent are destined to the west (via Alamo Street) in the a.m. peak hour for apartment trips. Ten percent of the trips are destined to the north, 22 percent are destined to the south, 34 percent are destined to the east, and 34 percent are destined to the west in the p.m. peak hour for apartment trips. Sixty percent of the trips are destined to the north, 10 percent are destined to the south, 20 percent are destined to the east, and 10 percent are destined to the west in the a.m. and p.m. peak hours for retail trips. Figure 3 illustrates the existing plus project peak-hour volumes.

Driveway Queuing Analysis

In order to ensure that the three project driveways would not present any queuing impacts, *SimTraffic* was used to create a queuing simulation for the project site. *SimTraffic* is a microsimulation tool that assesses roadway segments and intersections based on operational data and geometric specificities unique to the facility. *SimTraffic* can provide an extensive look at traffic conditions such as queuing in individual lanes of an intersection and the effect adjacent intersections have on each other by simulating discrete vehicle behavior. It should be noted that the project driveways exist in the present setting, and will stay in the same locations. As the proposed

use will be less intense than the Bellwood Shopping Center, possible driveway operational issues may be less intense than those associated with the currently allowed shopping center. One exception is that the current driveway near the eastern property line on Alamo Street is a secondary driveway with low volumes while the majority of site traffic uses the westerly Alamo Street driveway. The new design will eliminate the westerly driveway and result in all Alamo Street project traffic using the easterly driveway.

Figure 4 shows the queuing lengths at the three project driveways. Table B presents a summary of the *SimTraffic* queuing results. All driveway queuing worksheets are included as Attachment C. Ninety-fifth (95th) percentile queues reached approximately three vehicles (22 ft per vehicle) at the southbound left-turn movement and fewer than one vehicle at the northbound right-turn movement at Tapo Street/Northern Driveway. Vehicles will be able to pass these turning project vehicles by using the outer southbound through lane or inner northbound through lane. A 95th percentile queue of approximately one vehicle was observed at the northbound right-turn movement at Tapo Street/Southern RIRO Driveway. Similar to the northern driveway, vehicles will be able to pass these turning project vehicles by using the inner northbound through lane. A 95th percentile queue of approximately two vehicles was observed at the eastbound left-turn movement at Project Driveway/Alamo Street. These vehicles will be able to wait at the continuous two-way left-turn lane until they are able to make their turns safely. There will not be any westbound right-turn queue at this driveway.

Table B: Project Driveway Queuing Summary

No.	Intersection	Inbound Queue Lengths			
		A.M. Peak Hour		P.M. Peak Hour	
		Movement	Queue (feet)	Movement	Queue (feet)
1	Tapo Street/Northern Driveway	SBL	45	SBL	59
		NBR	3	NBR	4
2	Tapo Street/Southern RIRO Driveway	NBR	7	NBR	7
3	Project Driveway/Alamo Street	EBL	18	EBL	34
		WBR	0	WBR	0

Queues are measured by the 95th percentile queue lengths.
EBL = eastbound left
NBR = northbound right
RIRO = Right-in, Right-out
SBL = southbound left
WBR = westbound right

On-Site Circulation Review

The Robert Crommelin methodology was used to ensure that vehicle queuing does not extend onto a City street from the residential garage entry gates. This methodology is described in Robert Crommelin's *Entrance-Exit Design and Control for Major Parking Facilities* (1972). The Crommelin methodology applies a distribution statistical methodology where vehicular reservoir needs (queuing) at a site can be determined for a given traffic volume and the service rate of the proposed gate device. The Crommelin report has service rates for different gates. Based on the volume of inbound traffic and the design capacities (i.e., service rates), the traffic intensity is determined. Traffic intensity is the ratio between the average arrival rate (peak-hour volume) and the gate

service rate, which results in the length (22 ft per vehicle) necessary for adequate reservoir space. The Crommelin methodology analysis for the inbound vehicles at the gated entry is detailed in Attachment D.

In the Crommelin methodology, the "coded-card operated gate" control at 340 vehicles per hour was utilized for project vehicles. This is a conservative rate, because the proposed system would use a gate opener or transponder and would not require a vehicle to stop and insert a card, resulting in a faster rate. For the sake of a conservative analysis, 100 percent of inbound apartment trips were applied to both gated entries. It should be noted that gated access is only provided for residents, and guest parking will be available outside of the gated parking structure.

Based on this analysis, the gates for project vehicles require a reservoir of 22 ft (i.e., one vehicle). As Figure 4 shows, approximately 100 ft will be provided between the inbound western gate and the guest parking intersection and approximately 260 ft will be provided between the inbound eastern gate and Alamo Street. Therefore, the gated entries would have sufficient length for inbound project vehicles.

Sight Distance Analysis

A sight distance analysis was conducted along Tapo Street and Alamo Street at the three proposed project driveways and two internal parking structure access points to ensure driver visibility and safety. In the project vicinity, the Tapo Street and Alamo Street speed limits are 45 miles per hour (mph). According to Table 201.1 of the *Highway Design Manual* (HDM), the stopping sight distance for a roadway with the speed limit of 45 mph is 360 ft. For the internal parking structure access points, a speed limit of 15 mph was used, which requires a stopping sight distance of 100 ft.

Figure 5 illustrates the sight distances along Tapo Street, Alamo Street, and the project site drive aisles. The sight distance triangles shown in Figure 5 are measured 15 ft back from the edge of traveled way. No sight distance obstructions are located at the proposed project driveways.

Therefore, the project driveways and project drive aisles would meet the minimum sight distance requirements specified in the HDM.

If you have any questions, please call me at (949) 553-0666.

Sincerely,

LSA ASSOCIATES, INC.

Donson Liu, TE
Transportation Engineer

Attachments: A – Figures
B – Traffic Count Sheet
C – Synchro Queuing Worksheets
D – Crommelin Gate Stacking Analysis

ATTACHMENT A

FIGURES

Figure 1 – Site Plan
Figure 2 – Project Trip Distribution and Assignment
Figure 3 – Existing Plus Project Peak-Hour Volumes
Figure 4 – Queue Lengths and Gate Stacking Distances
Figure 5 – Sight Distance Analysis

LSA

FIGURE 1

N

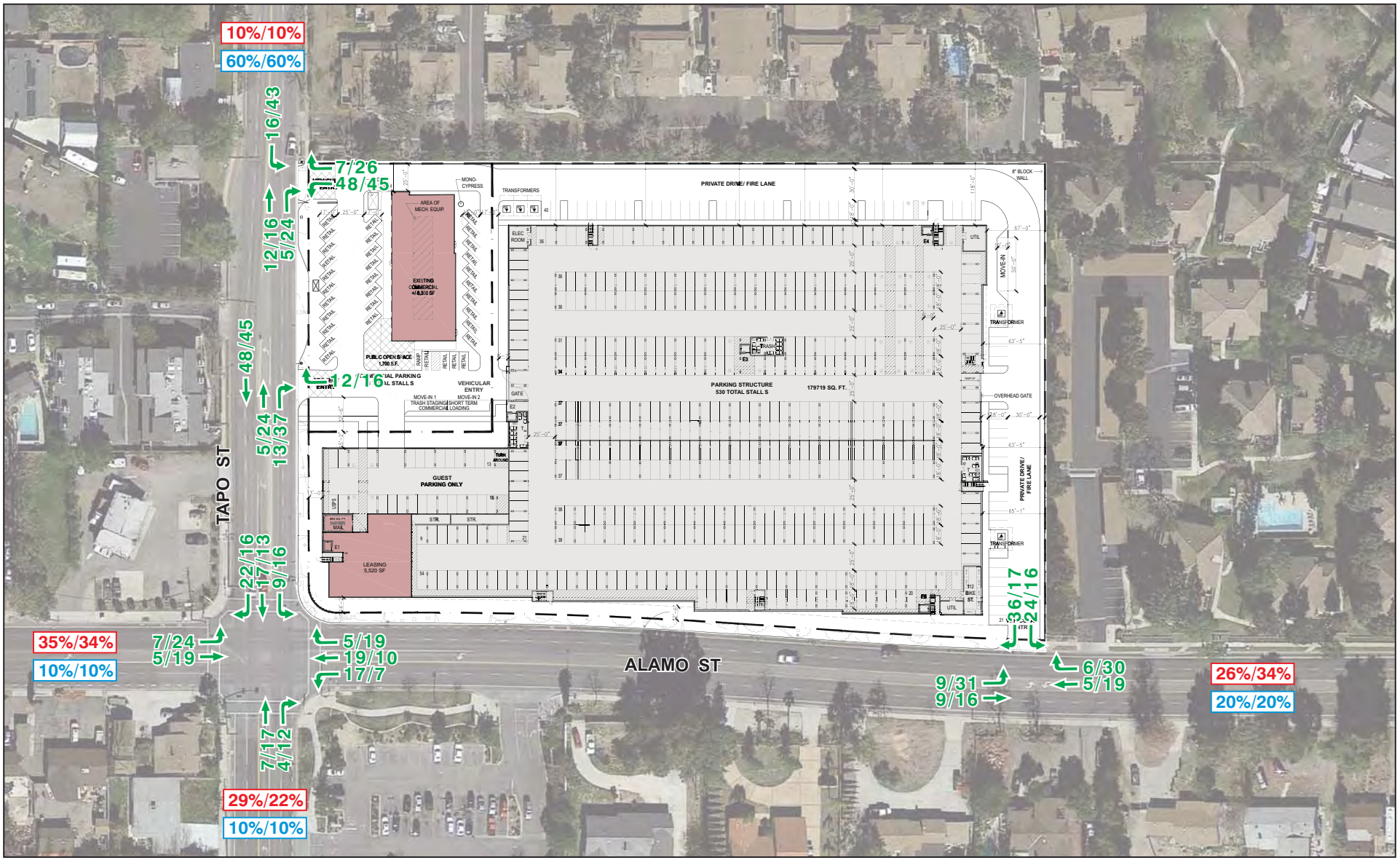
0 100 200
FEET

SOURCE: Architects Orange

Alamo Mixed-Use Access Analysis

Site Plan

I:\AMG1603\G\Site Plan.cdr (11/1/2016)



LSA

FIGURE 2

LEGEND

XX/YY - AM/PM Peak-Hour Volumes

XX/YY - Apartment AM/PM Trip Distribution

XX/YY - Retail AM/PM Trip Distribution

N

0 65 130

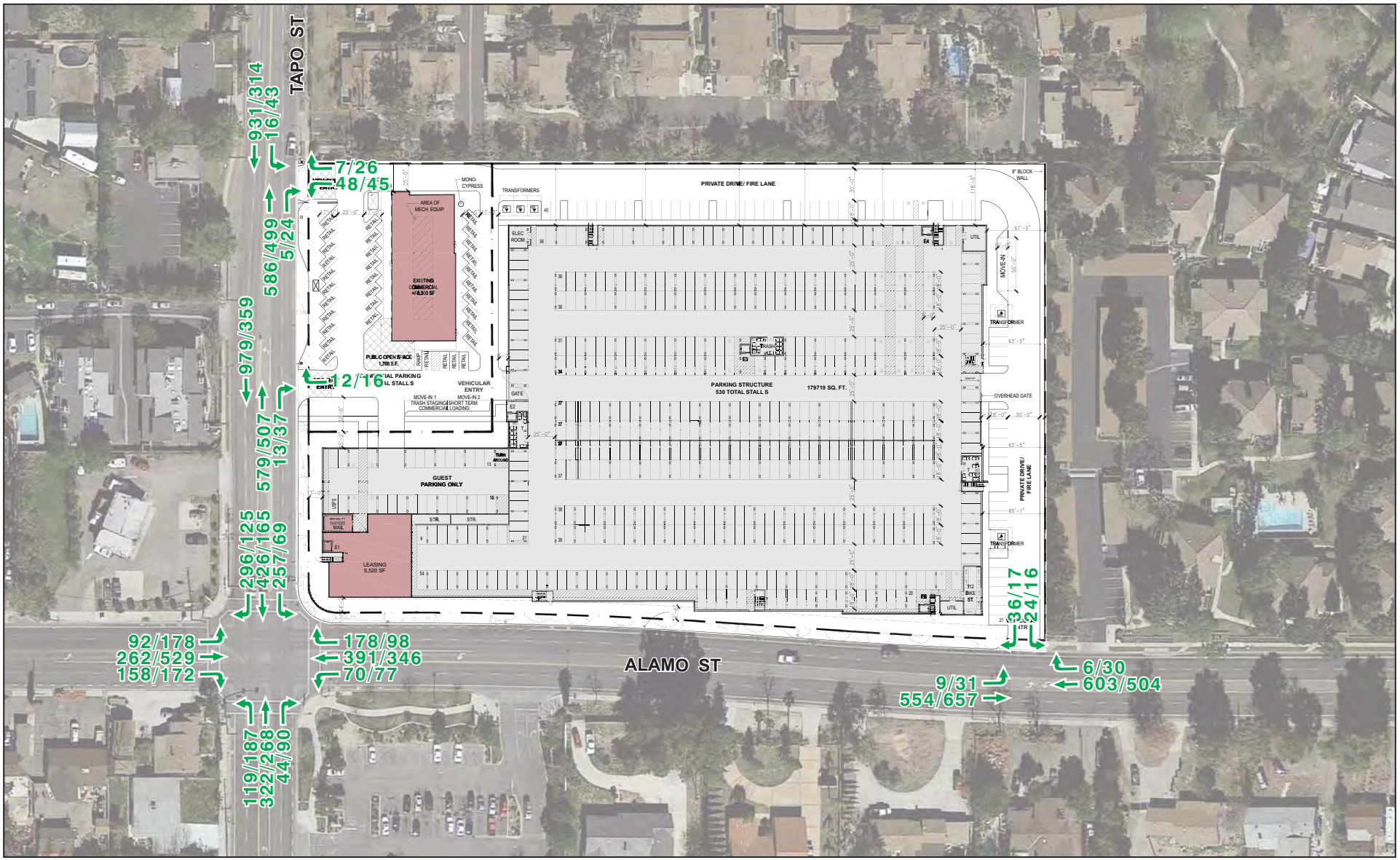
FEET

SOURCE: Architects Orange

Alamo Mixed-Use Access Analysis

Project Trip Distribution and Assignment

I:\AMG1603\G\Trip Distribution.cdr (11/1/2016)



LSA

LEGEND

XX/YY - AM/PM Peak-Hour Volumes

N

0 65 130

FEET

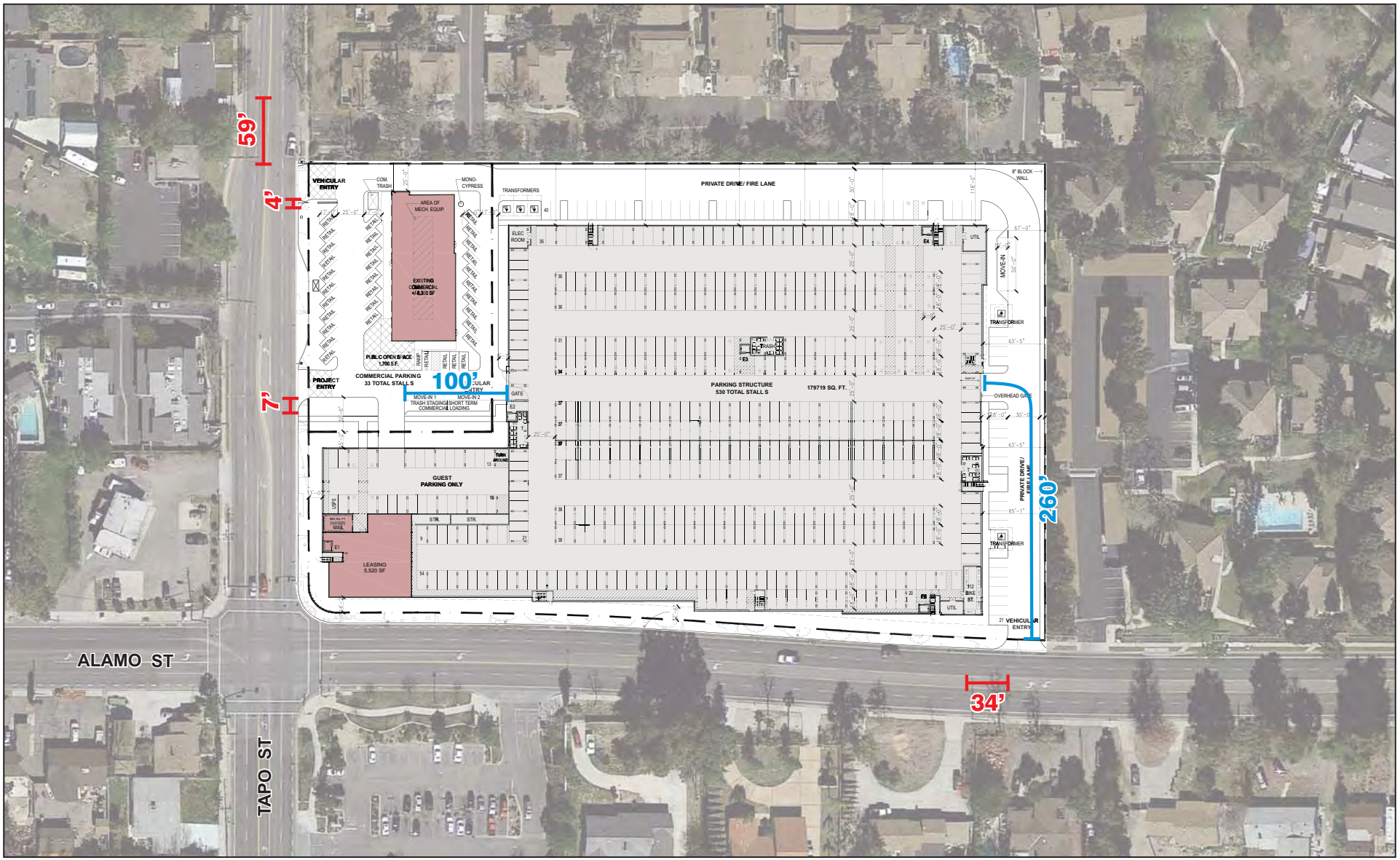
SOURCE: Architects Orange

FIGURE 3

Alamo Mixed-Use Access Analysis

Existing Plus Project Peak-Hour Volumes

I:\AMG1603\G\Ex+Project Volumes.cdr (11/1/2016)



LSA

FIGURE 4

LEGEND

xx' - Queue Lengths

xx' - Gate Stacking Distances

N

0 65 130

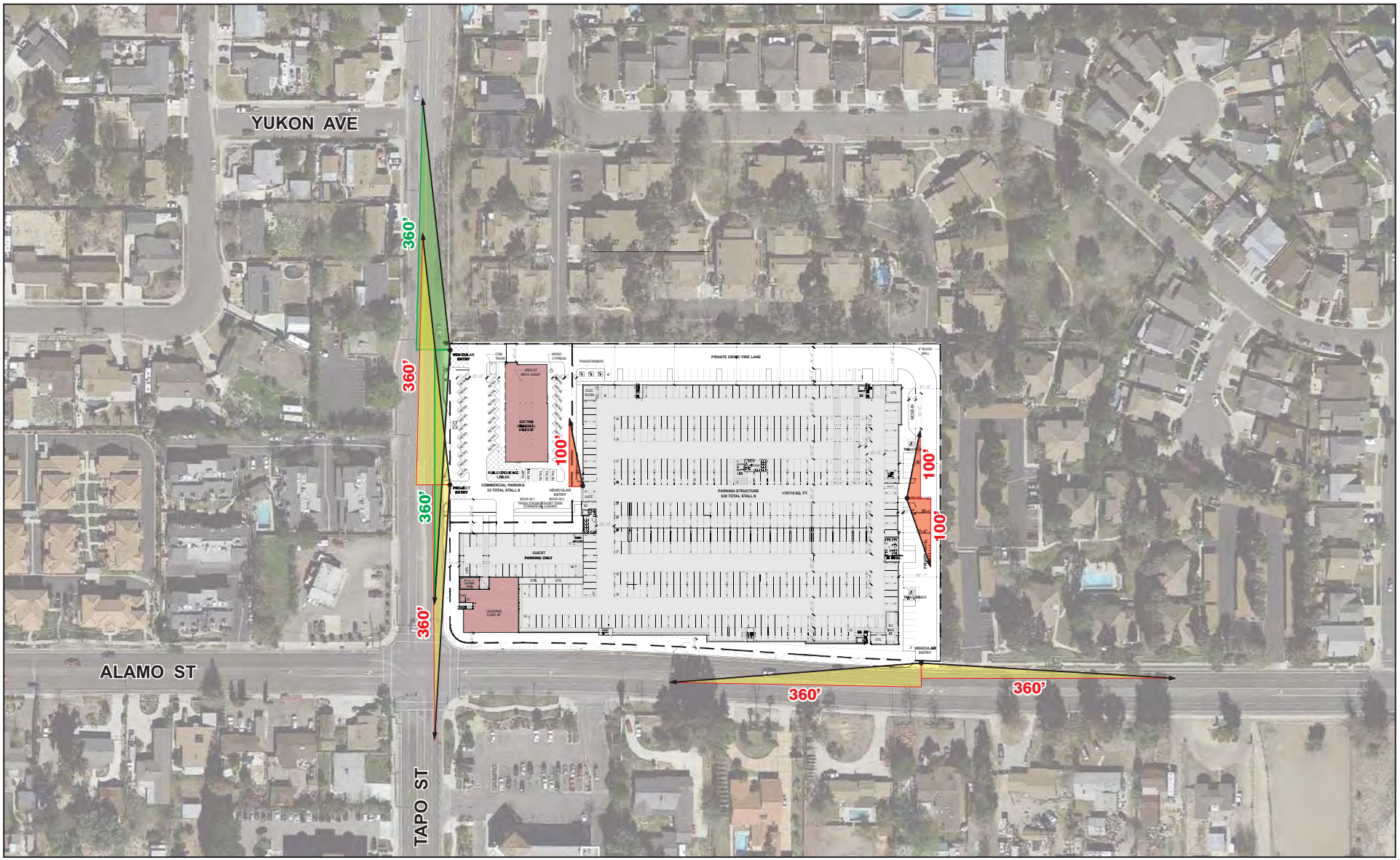
FEET

SOURCE: Architects Orange

Alamo Mixed-Use Access Analysis

Queue Lengths and Gate Stacking Distances

I:\AMG1603\G\Queues&Gate Stacking.cdr (11/3/2016)



LSA

FIGURE 5

N

0 100 200
FEET

SOURCE: Architects Orange

Alamo Mixed-Use Access Analysis
Sight Distance Analysis

I:\AMG1603\G\Sight Distances.cdr (11/1/2016)

ATTACHMENT B

TRAFFIC COUNT SHEET

Intersection Turning Movement

Prepared by:

NDS

National Data & Surveying Services

TMC Summary of Tapo St/Alamo St

Project #: 09-5419 RTOR-001

Right Turns on Red

N

SOUTHBOUND APPROACH LANES

Tapo St

	0	2	1
TOTAL	90	0	0
PM	40	0	0
NOON	0	0	0
AM	50	0	0

Alamo St

Alamo St

EASTBOUND APPROACH LANES

	TOTAL	AM	NOON	PM
1	0	0	0	0
2	0	0	0	0
0	58	26	0	32

WESTBOUND APPROACH LANES

AM	NOON	PM	TOTAL	
33	0	21	54	0
0	0	0	0	2
0	0	0	0	1

Tapo St

PM	0	0	16
NOON	0	0	0
AM	0	0	11
TOTAL	0	0	27
	1	2	0

NORTHBOUND APPROACH LANES

TURNING MOVEMENT COUNT

Tapo St / Alamo St

(Intersection Name)

Tuesday — Day

11/24/09 — Date

am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

CONTROL: Signalized

AM PEAK HOUR 715 AM

NOON PEAK HOUR 0 AM

PM PEAK HOUR 445 PM

Intersection Turning Movement

Prepared by:

NDS

National Data & Surveying Services

TMC Summary of Tapo St/Alamo St

Project #: 09-5419-001

N

SOUTHBOUND APPROACH LANES

	0	2	1
TOTAL	383	561	301
PM	109	152	53
NOON	0	0	0
AM	274	409	248

Tapo St

Alamo St

Alamo St

EASTBOUND APPROACH LANES

	TOTAL	AM	NOON	PM
1	239	85	0	154
2	767	257	0	510
0	330	158	0	172

WESTBOUND APPROACH LANES

AM	NOON	PM	TOTAL	
173	0	79	252	0
372	0	336	708	2
53	0	70	123	1

	187	251	78
PM			
NOON	0	0	0
AM	119	315	40
TOTAL	306	566	118
	1	2	0

Tapo St

NORTHBOUND APPROACH LANES

TURNING MOVEMENT COUNT

Tapo St / Alamo St

(Intersection Name)

Tuesday — Day

11/24/09 — Date

am	7:00 AM	-	9:00 AM
noon		-	
pm	4:00 PM	-	6:00 PM

CONTROL: Signalized

AM PEAK HOUR 715 AM

NOON PEAK HOUR 0 AM

PM PEAK HOUR 445 PM

ATTACHMENT C

SYNCHRO QUEUING WORKSHEETS

Intersection: 1: Tapo Street & Northern Driveway

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	58	4	82
Average Queue (ft)	27	0	10
95th Queue (ft)	51	3	45
Link Distance (ft)	9	136	301
Upstream Blk Time (%)	23		
Queuing Penalty (veh)	12		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Tapo Street & Southern Driveway

Movement	WB	NB	SB	SB
Directions Served	R	TR	T	T
Maximum Queue (ft)	31	9	66	36
Average Queue (ft)	8	0	4	3
95th Queue (ft)	31	7	30	20
Link Distance (ft)	13	166	136	136
Upstream Blk Time (%)	1		0	
Queuing Penalty (veh)	0		0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Alamo Street & Project Driveway

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	28	65
Average Queue (ft)	3	30
95th Queue (ft)	18	53
Link Distance (ft)		201
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 13

Intersection: 1: Tapo Street & Northern Driveway

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	56	4	86
Average Queue (ft)	28	0	20
95th Queue (ft)	44	4	59
Link Distance (ft)	9	136	301
Upstream Blk Time (%)	12		
Queuing Penalty (veh)	8		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Tapo Street & Southern Driveway

Movement	WB	NB
Directions Served	R	TR
Maximum Queue (ft)	36	10
Average Queue (ft)	12	0
95th Queue (ft)	37	7
Link Distance (ft)	13	166
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Alamo Street & Project Driveway

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	42	48
Average Queue (ft)	10	23
95th Queue (ft)	34	47
Link Distance (ft)		201
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Zone Summary

Zone wide Queuing Penalty: 9

ATTACHMENT D

CROMMELIN GATE STACKING ANALYSIS

Table D: Crommelin Methodology Gate-Stacking Analysis

Table D.1: Project Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Apartment	28	114	142	111	61	172

[1] Trips based on the Institute of Transportation Engineers (ITE) *Trip Generation* manual, 9th Edition (2012).

Table D.2: Peak-Hour Service Rate

Service Rates per Lane[1]		
Average Headway (sec/veh)	Design Capacity (veh/hr)	Capacity (veh/hr)
8.9	340	425

[1] Obtained from Robert Crommelin's *Entrance-Exit Design and Control for Major Parking Facilities* (1972).

Table D.3: Peak-Hour Stacking Analysis

Inbound Trip Type	Service Rate[1]	Arrival Rate[2]		Intensity[3]		Required (ft)[4]	
		AM	PM	AM	PM	Average	95th %
Apartment	340	28	111	0.08	0.33	**0**	**22**

[1] The Service Rate is the Design Capacity.

[2] Arrival Rate is the peak-hour inbound volume.

[3] Traffic Intensity is the Arrival Rate ÷ Service Rate per the "Reservoir Needs vs. Traffic Intensity" table.

[4] Number of ft indicated in the "Reservoir Needs vs. Traffic Intensity" table (based on the highest of the AM and PM Traffic Intensity).
22 ft equates to 1 vehicle. "Average" is the reservoir required for the average queue.
"95th %" is the reservoir required so a queue does not exceed the reservoir 5 times in 100.

ft = feet

APPENDIX F

DRIVEWAY QUEUING WORKSHEETS

Intersection: 1: Tapo Street & Northern Driveway

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	51	41	84
Average Queue (ft)	29	1	18
95th Queue (ft)	43	29	59
Link Distance (ft)	9	136	301
Upstream Blk Time (%)	37	0	
Queuing Penalty (veh)	29	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Tapo Street & Southern Driveway

Movement	WB	NB	SB	SB
Directions Served	R	TR	T	T
Maximum Queue (ft)	31	22	58	78
Average Queue (ft)	14	1	2	8
95th Queue (ft)	39	12	27	45
Link Distance (ft)	13	166	136	136
Upstream Blk Time (%)	1		0	
Queuing Penalty (veh)	0		0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Alamo Street & Project Driveway

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	22	68
Average Queue (ft)	1	31
95th Queue (ft)	9	57
Link Distance (ft)		201
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 29

Intersection: 1: Tapo Street & Northern Driveway

Movement	WB	NB	SB
Directions Served	LR	T	LT
Maximum Queue (ft)	41	6	51
Average Queue (ft)	24	0	8
95th Queue (ft)	44	4	32
Link Distance (ft)	9	136	301
Upstream Blk Time (%)	9		
Queuing Penalty (veh)	5		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Tapo Street & Southern Driveway

Movement	WB	SB
Directions Served	R	T
Maximum Queue (ft)	31	12
Average Queue (ft)	8	0
95th Queue (ft)	31	6
Link Distance (ft)	13	136
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Alamo Street & Project Driveway

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	34	56
Average Queue (ft)	5	24
95th Queue (ft)	22	51
Link Distance (ft)		201
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Zone Summary

Zone wide Queuing Penalty: 5

APPENDIX G

CROMMELIN REPORT

ENTRANCE-EXIT DESIGN AND CONTROL FOR MAJOR PARKING FACILITIES

Robert W. Crommelin, P.E., President
Robert Crommelin and Associates, Inc.
Encino, California

Prepared for Presentation at:

"SEMINAR '72" Los Angeles Parking Association, Biltmore Hotel,

Los Angeles, California, October 5, 1972

It hasn't been too many years since a 500-space garage was thought of as a large parking facility. In recent years, garages with over 4,000 spaces have been placed in operation and larger ones are on the drawing boards. Success in the operation of these major parking facilities is dependent upon proper design of access to the facility, in addition to efficient management. Provision of adequate access design and control is a significant item which must be considered as part of the first design concept. The traffic engineer, teamed with the owner's representatives, the architect, and the future parking operator, must work together to develop a proper access and control plan. I have recently read a statement by a nationwide garage design consultant that reservoir space for entrances to garages is no longer an important consideration because of the capacity of ticket dispensers with gates. This is completely untrue as will be brought out later. Thinking of this type can lead to ineffective design which causes backup onto public streets with the accompanying potential hazards and congestion.

This paper covers three principal areas of concern: (1) determination of the number of entrance and exit lanes required based upon the parking control strategy and type of parker served; (2) data to allow comparison of the capacities of the various types of control strategies to allow selection of the one appropriate for each facility, and; (3) determination of needed reservoir space based upon the control strategy selected.

Typical capacity values for the various methods of parking control are included in this paper. A word of caution is necessary since there is much variation in capacity values due to physical conditions present as well as the familiarity of the parker with the parking facility itself. Each major facility requires detailed analysis of its needs and generalized factors are not always adequate.

Design Methodology

In order to provide adequate access design and control for major parking facilities, it is necessary to identify the probable characteristics of the future users of the facility. In this paper it is assumed that the size of the garage has been determined based upon a comprehensive parking study (general public facilities), or the amount necessary to serve a given land use (single purpose facility).

The first step is to determine directional peak hour volumes as related to the total size of the parking garage. Based upon the principal land use served, tables are included in this paper which allow the designer to prepare an estimate of peak hour volumes. In general, our research has found that it is adequate to assume for design purposes that the morning inbound peak flows are approximately equal to the evening outbound peak flows. After determining the peak volumes, a control strategy must be selected which would be appropriate for the intended operation of the garage. Selection of whether it would be best to allow parkers to enter without charge and pay as they leave or to pay a flat fee on the way in and have no control upon exiting will have a significant impact upon traffic capacity. Whether to use no fee, a flat fee, a variable fee, or a combination of fees must be determined as well as whether it is possible to receive the payment in advance, or to collect individual payment of the fee. All of these alternatives should be considered for each individual parking facility in order to determine its proper control strategy.

When the peak hour volumes and control strategy have been determined, it is then possible to determine the number of lanes

which will be required to adequately serve inbound and outbound traffic to the parking facility. This requires knowledge of typical service rates of various methods of parking control. The next step is to determine the amount of reservoir space required to serve the parking control location. Following all of these steps will lead to an efficient, well-working garage which will have minimum impact upon the surrounding street system.

Determination of Peak-Hour Volumes

Comprehensive parking studies have provided much information concerning the characteristics of the users of major parking facilities. In general, it may be stated that the traffic characteristics of a garage will be principally related to the trip purpose of the user and the type of land use served by the facility. Both of these items relate to the length of time the parker is in the facility and the time of day during which major traffic flows occur.

Table 1 was prepared which compares the trip purpose of the parker with the length of time which he parks as observed in the Los Angeles Central Business District. Employees are considered long-term parkers since 80 percent parked three hours or longer; at the peak time of the day, 84 percent of the daily employee parkers were present; and, their average parking duration was 5.6 hours. A garage, which serves employees primarily, would tend to have higher peak hour volumes than would one which serves the other

Table 1
TRIP PURPOSE VS LENGTH OF TIME PARKED

TRIP PURPOSE	PERCENT OF DAILY PARKERS WITH DURATION SHOWN		RATIO OF PEAK ACCUMULATION TO TOTAL DAILY PARKERS	AVERAGE DURATION
	SHORT-TERM (less than 3 hrs.) (percent)	LONG-TERM (3 hrs. or longer) (percent)		(hours)
Work	20%	80%	0.84	5.6
Shopping	85	15	0.26	1.6
Commercial Business	86	14	0.25	1.5
Social-Recreation	91	9	0.24	1.2
Personal Business	94	6	0.21	1.0
Eat Meal	97	3	0.22	0.9

Source: Los Angeles CBD Parking Study, 1967

uses shown in the table. As an example, 35 percent of the shoppers had a parking duration of less than three hours with an average duration of 1.6 hours. More importantly, only 26 percent of the total daily parkers with a shopping trip purpose were present at the time of peak accumulation. This indicates that the peak hour inbound or outbound volume will be less for a garage serving principally shopper parkers than for a similar sized facility serving only employees.

In order to relate the type of land use served with peak hour volumes, the term entering-leaving ratio has been used. This term represents the volume of cars entering or leaving during a peak hour divided by the maximum accumulation of cars in the parking facility (taken as the size of the facility). If the inbound morning or outbound evening peak hour is equal to half the number of spaces in the garage, the entering-leaving ratio is 0.50. Using data obtained by special counts taken by personnel of my firm, as well as information reported in various parking studies, Table 2 was prepared which shows the range of values of the entering-leaving ratio for various land uses served. It may be seen in the table that the range of values for an individual parking facility may vary considerably. This variation may be explained by the typical length of time parked as well as the variation in the times when employees must start work or are let out of work.

Table 2
LAND USE SERVED VS ENTERING-LEAVING RATIO

PRINCIPAL LAND USE SERVED	ENTERING-LEAVING[a] RATIO (Range of Values)
Hotel-Motel	0.25-0.35
College-University	0.40-0.60
Retail Commercial	0.45-0.65
Public Office Building	0.45-0.65
Private Offices-Multiple Tenant	0.45-0.60
Private Offices-Single Tenant	0.55-0.75
Hospital	0.60-0.70
Medical Offices	0.70-0.85
Airport (public parking)	0.70-0.85
Manufacturing Plant	0.70-0.90
Restaurant (sit-down)	0.80-0.95
Branch Bank	0.90-1.20

[a] Volume of cars entering and leaving in peak hour divided by maximum accumulation of cars (capacity of facility)

Source: Special counts by RC and A; various parking studies by others

In locations where there is some staggering of employment hours, the entering-leaving ratio tends to be lower. The characteristics of the potential users of the parking facility must be studied in detail to arrive at the proper entering ratio.

Once the entering-leaving ratio has been selected, it is possible to determine the actual peak hour design volumes to be used in determining the parking control strategy and the design of access lanes.

Parking Control Strategy Selection

Selection of the proper type of parking control strategy is exceedingly important in the successful operation of a major parking facility. The strategy involves the method of parking control, the charge which will be placed upon the user, and the type of payment to be collected from the user. Table 3 shows the application of various control strategies as related to the type of parking facility used as well as to the type of parking control equipment. For shopper and business parkers, it is normal to allow free entry with payment of a variable fee on an individual basis as they exit the garage. In the case of employees, it is more normal to allow them to enter freely and have a prepaid monthly charge which could be checked through the use of parking permits, coded cards, tokens, or other means as they exit. Parkers at sports events exhibit high peak volumes but have a length of time parked which can be estimated.

Table 3
APPLICATION OF VARIOUS CONTROL STRATEGIES

	CONTROL STRATEGY APPLICABILITY					
	CONTROL METHOD		TYPE CHARGE		TYPE PAYMENT	
ITEM	Free-In Pay-Out	Pay-In Free-Out	Flat Fee	Variable Fee	Pre-paid	Individual Payment
Preferred Method To Serve:						
Employee	X	X	X		X	
Office Bldg. Visitor	X			X		X
Sports Event		X	X			X
Shopper	X			X		X
Student	X		X		X	
Air Traveler	X			X		X
Control Type						
Ticket Spitter	X			X		X
Cashier/Attendant	X	X	X	X	X	X
Time Stamp Ticket Manually	X			X		X
Coded Card	X	X	X		X	
Coin-Operated Gate	X		X			X
Token-Operated Gate	X	X	X	X	X	
Parking Meter	-	-	X	X		X

For this type of condition, it is much more appropriate to collect a flat fee inbound and to have no control outbound. This latter type of control was the one which we recommended for use at the Los Angeles Convention Center.

Parking Control Operating Characteristics

Table 4 indicates our findings concerning the service rates for various types of parking controls. We have taken the design service rate as being equal to 80 percent of the maximum service rate. There is considerable variation in service rates and careful study must be given to the probable characteristics of the users of the parking facility as well as the experience of the personnel operating the facility.

For the control measures normally used in entering a facility, the average headways vary from 3.6 seconds per vehicle for a clear aisle with no control to 20.4 seconds per vehicle for a coin-operated gate. In terms of design hourly capacities, the rates would be 800 per hour per lane for clear aisles and only 140 per hour per lane for coin-operated gates. The most common type of control used at major parking facilities is the ticket dispenser with a gate. Research in England identified the fact that there is a significant difference in the capacity of this equipment depending upon whether the parker has an easy direct approach or if a sharp turn is required to approach the equipment. This is obvious since a straight approach allows a parker to position himself in a reasonable location to pull the ticket to open the gate. Thus, the design of the approach to a ticket dispenser can cause the hourly capacities to vary between 305 and 520 vehicles per hour.

Internally, the circulation pattern can affect the capacity of the inbound approach. It is very important to have a minimum of interference within the parking facility so that once a driver leaves the entrance parking control, he can do so without delaying the next inbound parker immediately behind him. This can be accomplished by avoiding situations where outbound parkers queued up from the exit control block parkers entering the facility.

Table 4

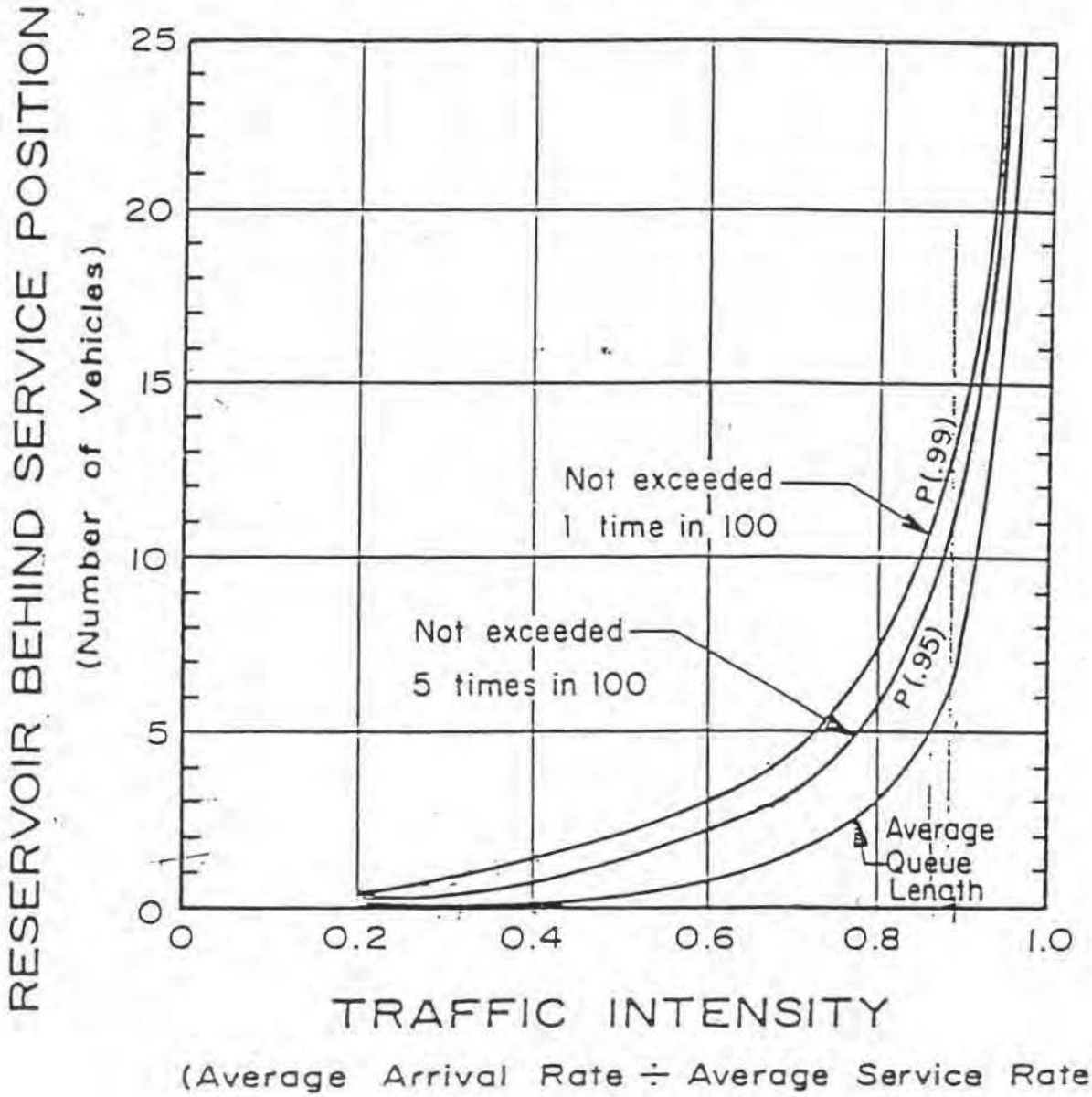
PARKING CONTROL SERVICE RATE

TYPE OF CONTROL	TYPICAL SERVICE RATES PER LANE[a]		
	AVERAGE HEADWAY (Sec/Veh)	HOURLY CAPACITY Design[b] (Veh/Hr)	HOURLY CAPACITY Maximum (Veh/Hr)
Entering:			
Clear aisle, no control	3.6	800	1,000
Ticket dispenser, no gate	5.0	575	720
Time Stamp and hand to driver	8.5	340	425
Coded-card operated gate	8.9	340	425
Cashier, flat fee, no gate			
No information given	9.2	310	390
Direction-info needed	14.8	195	250
Ticket dispenser w/gate			
Sharp turn @ approach	9.5	305	380
Easy direct approach	5.5	520	650
Coin operated gate	20.4	140	175
Internal:			
Clear aisle or ramp, no parking	2.0	1,200	1,800
Straight ramp w/bend @ end	2.2	1,000	1,610
Circular ramp, 30'R @ C/L	2.2	840	1,650
Aisle with adjacent 9 x 18' stalls			
Inbound	3.5	830	1,040
Outbound	8.6	335	420
Exiting:			
Light street congestion	7.2	400	500
Moderate street congestion	9.0	320	400
Coded card/token-operated gate	9.0	320	400
Cashier, flat fee w/gate	13.4	215	270
Cashier, variable fee w/gate	19.5	150	185
Coin operated gate	20.4	140	175

(a) Assumes no significant interference by pedestrians, other traffic, etc.

(b) Taken as 80% of maximum rate; require 6 car lengths reservoir in advance of control points.

RESERVOIR NEEDS VS TRAFFIC INTENSITY



x22' (auto's)

x35' (service)

1

Assumptions:

1. Arrivals follow a Poisson Distribution
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.

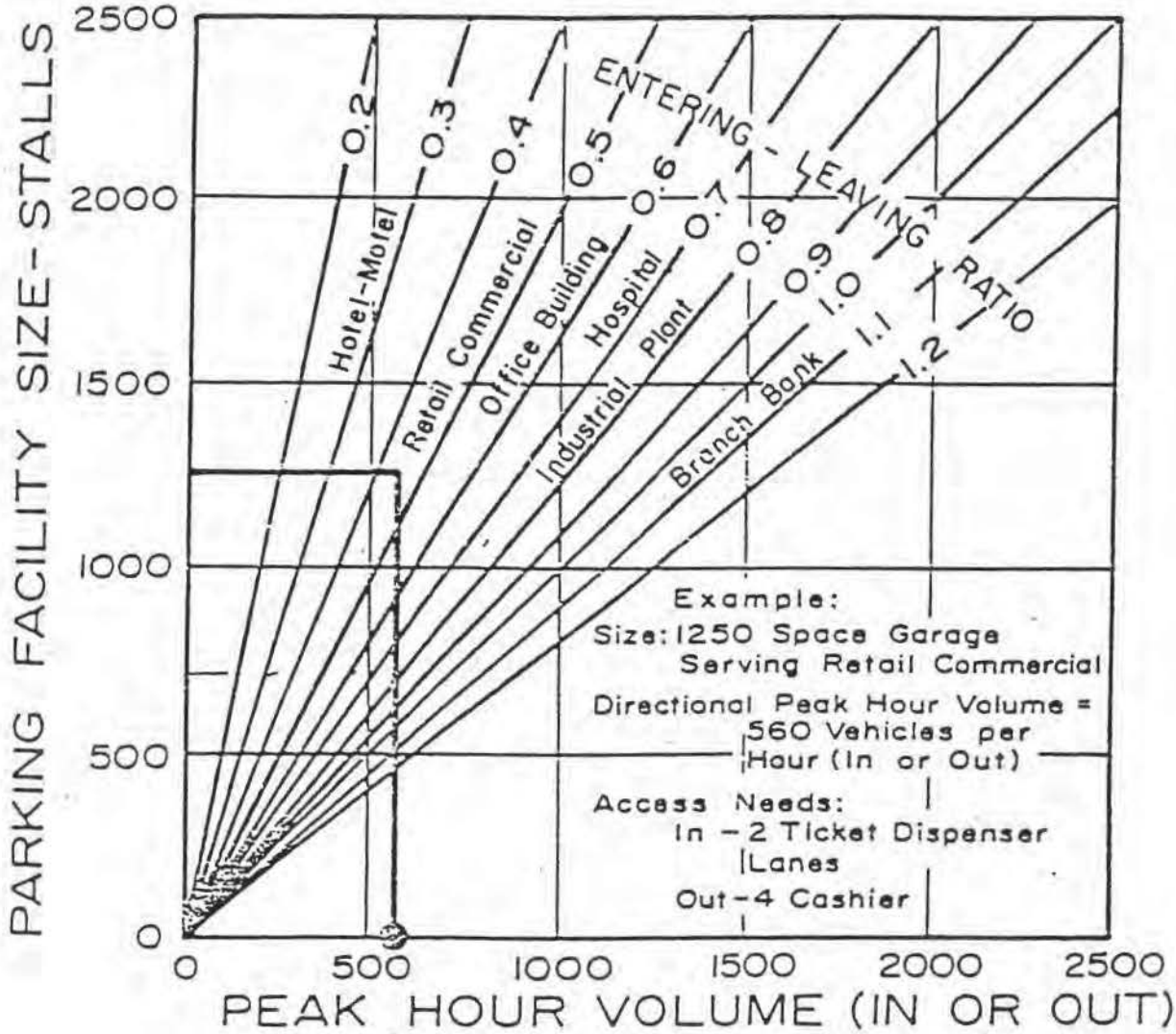
Note: To obtain reservoir length, use 22 feet per vehicle.

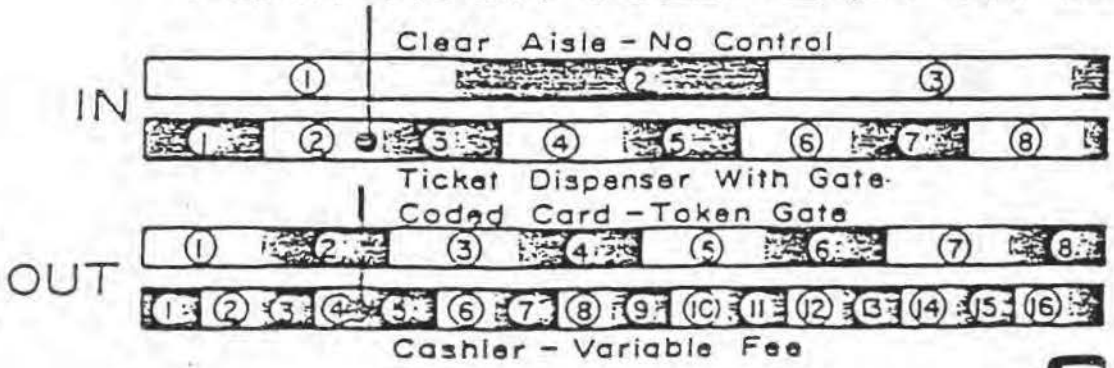
The capacity of exits from a major parking facility are dependent upon adequate space approaching the exit control location as well as adequate reservoir between that location and the driveway to the public street. Analysis must be conducted on both of these reservoir needs and sufficient lanes as well as sufficient reservoir length provided to allow proper operation The emphasis of this paper will be upon the capacity of the exiting parking control itself. The most common type of operation involves use of a cashier collecting a variable fee from a parker based upon length of time parked. This type of control has a capacity of approximately 150 vehicles per hour. Another approach might be to have the parker pay his fee to the cashier before entering his car and then utilize a token operated gate as a means of exit control. This control strategy would have over twice the capacity of a cashier lane itself and could have application where there is insufficient space to provide an adequate number of cashier lanes.

Reservoir Needs

If you have ever watched cars approaching any type of parking control, you know that they do not come at an even rate. Even though there may be nearby traffic signals which may cause the approaching parkers to arrive in groups or platoons, random arrival is the normal approach characteristic assumed. Research has shown that random arrivals or events in a traffic stream tend to follow the Poisson mathematical distribution. This distribution provides a means that. if the average rate is known, the probability of exceeding a given volume in a unit of time may be calculated. Thus, if you know the average volume, you may calculate the surges in volume to allow design of reservoir space. As an example, if the average number of cars in a five-minute interval is 10, use of Poisson statistical techniques will yield the fact that no more than 18 cars will arrive in a five-minute interval within a probability that this amount will be exceeded only one time in a 100 five-minute intervals. Use of these calculation techniques allow the determination of the amount of reservoir required to serve a given type of parking control.

PARKING FACILITY SIZE VS ACCESS NEEDS





The relationship between the arrival of vehicles and the ability of the parking control equipment or strategy to handle these vehicles are the most important items in determining reservoir space. If the average number of arrivals per unit of time is called "v" and "s" is the average rate of service (discharge) per unit of time, the ratio of v/s is used to determine the amount of reservoir space. This ratio is called traffic intensity ("i"). The average length of the queue ($\overline{q}$) behind the vehicle being serviced is equal to $\overline{q} = \frac{i^2}{(1-i)}$. This formula assumes that the arrival of vehicles at the service point follows a random distribution, the servicing time for vehicles can be represented by an exponential probability function, and that the flow is equally divided among service facilities if there is more than one lane serving a given area of the garage.

Knowing the average queue length and selecting a probability value which represents the frequency that the design length will be exceeded, will allow the designer to determine the amount of reservoir required behind the service position. These formulas and probabilities were utilized to prepare Figure 1 which compares traffic intensity with required reservoir for common probabilities used in design. The mathematics are such that, as the average volume approaches the average service rate, the amount of backup will be infinite. In addition, the probability that the amount of reservoir space for a given volume will <u>never</u> be exceeded also is infinite. In actuality, these conditions do not occur but the general relationships hold true based upon our field observations.

As may be noted in the figure, an insignificant amount of reservoir is required when the average arrival rate is 50 percent or less of the average service rate of the parking control device. At this level, only a two-car reservoir would be required. As the ratio of traffic intensity increases above 0.7, the amount of reservoir space increases rapidly. We have selected a traffic intensity of 0.9 as appropriate for design and a probability that the determined reservoir would be exceeded only five times in 100. Thus, if the average service rate for a given type of parking

control is known and sufficient lanes are provided so that the average arrival rate during the peak hour is 0.8 times the average service rate, a reservoir of six car lengths behind each service position would be adequate to meet the needs of the facility. If this is physically impossible, a traffic intensity of 0.6 should be used to determine the number of lanes requiring only a two-car reservoir.

Summary

Having determined the peak hour volumes, the parking control strategy, the number of lanes, and the reservoir length to adequately serve the peak-hour volumes, the physical design of the facilities then may be made. As noted previously, having an inadequate capacity to serve the traffic volumes approaching the control means can have a very drastic effect upon the backup which will occur. This backup creates adverse operating characteristics in and around the facility and also causes the length of time that a parker is involved in entering or leaving a garage to grow significantly. Thus, the design features of the facility can have an impact on the attitudes of the users and indirectly affect the success or failure of the parking facility in attracting customers or users.

To provide a means of easily determining the number of lanes necessary for various types of parking garages, Figure 2 was prepared which allows the designer to directly translate the size of the garage and the type of land use served into the number of necessary access lanes for the parking control strategy assumed. The example shows that a 1,250-space garage serving a retail commercial facility will normally have a directional peak hour volume of 560 vehicles per hour. If inbound ticket dispensers with gates are used, two lanes will be adequate to serve this garage. If cashiers collect variable fees, a total of four exit cashier lanes will be required. Normally these four lanes will not be provided all in the same location and, of course, it would be necessary to operate all four only during peak hours.

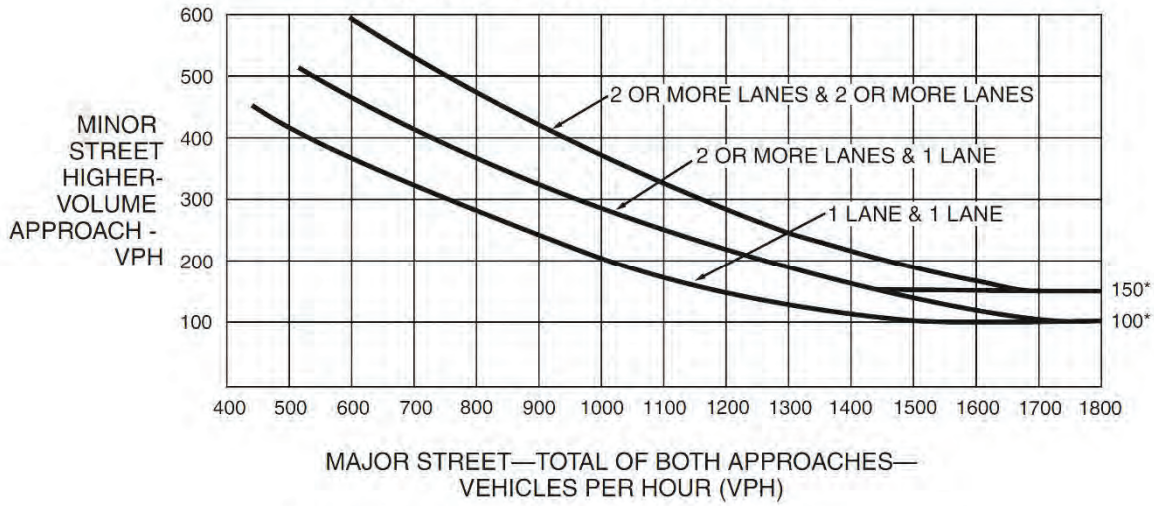
In the case of an office building rather than a retail facility, it would be possible to use coded card exit gates for monthly parkers. This would significantly reduce the required number of exit lanes since transient visitors are a much lower percentage of the peak hour volumes for an office building than they are in a garage serving a retail facility. The reduction in construction and operating cost would be significant.

A warning is necessary concerning the use of Figure 2 since it was based upon very generalized information. Each individual major parking facility must be considered on its own and its access needs determined in light of the characteristics of the probable users of the facility itself. In order to have satisfied customers and users of a major parking facility, thorough investigation and determination of access needs must be accomplished.

APPENDIX H

CAMUTCD TRAFFIC SIGNAL WARRANT WORKSHEETS

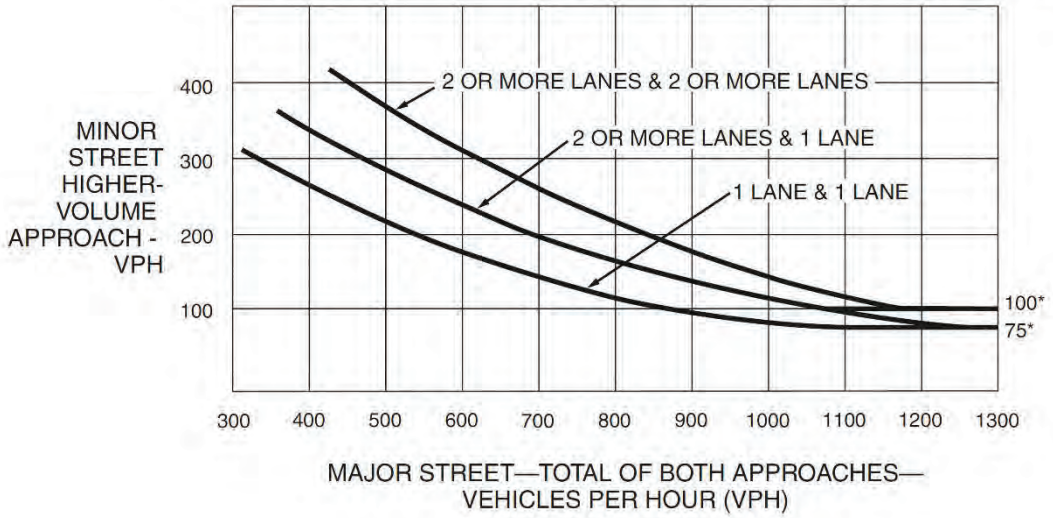
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-7. Warrant 4, Pedestrian Peak Hour

*Note: 133 pph applies as the lower threshold volume.

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)

*Note: 93 pph applies as the lower threshold volume.