

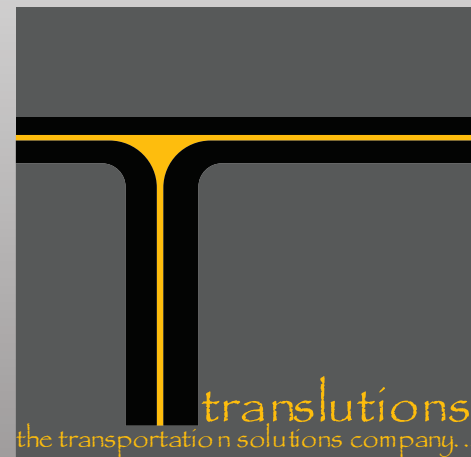
**TOPAZ ROAD AND
EUCALYPTUS STREET
RESIDENTIAL
TRAFFIC IMPACT ANALYSIS**

FEBRUARY 5, 2021

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1.0 INTRODUCTION

This report presents the methodology, findings and conclusions of the traffic study prepared for the proposed Topaz Road and Eucalyptus Street Residential project (the project). The proposed project will be located on the southeast corner of Topaz Road and Eucalyptus Street in the City of Victorville (City). The proposed project will include 68 single-family dwelling units.

1.1 Purpose of the Traffic Study and Study Objectives

This report is intended to satisfy the requirements for a traffic study established by the City of Victorville's "General Guidelines for Conducting Traffic Studies and Determination of Intersection Level of Service and Improvement Needs" adopted January 2005, the City of Victorville's "Vehicle Miles Traveled (VMT) Analysis Guidelines", the SBCTA Congestion Management Program (CMP), and the requirements for the disclosure of potential impacts and mitigation measures per the California Environmental Quality Act (CEQA).

The San Bernardino CMP is implemented by the San Bernardino County Transportation Authority (SBCTA). The CMP requires analysis of off-site intersections potentially affected by the project, which the CMP defines as intersections at which the project is forecast to add 50 or more peak hour trips. This report evaluates five intersections under six analysis scenarios and also evaluates alternative modes of travel including transit, bicycle/pedestrian facilities near the project.

1.2 Project Location & Study Area

As stated earlier, the project is located on the southeast corner of Topaz Road and Eucalyptus Street in the City of Victorville. Figure 1 shows the regional location of the project. The project proposes the construction of 68 single-family dwelling units and is anticipated to open in 2022. Figure 2 illustrates the site plan of the proposed project.

Based on the trip generation and trip distribution of the proposed project, and based on discussion with City staff, this report analyzes the following five intersections for traffic operations:

1. Mesa Linda Street and Eucalyptus Street.
2. Topaz Road and Sycamore Street.
3. Topaz Road and Eucalyptus Street.
4. Topaz Road and Street A.
5. Street B and Eucalyptus Street.

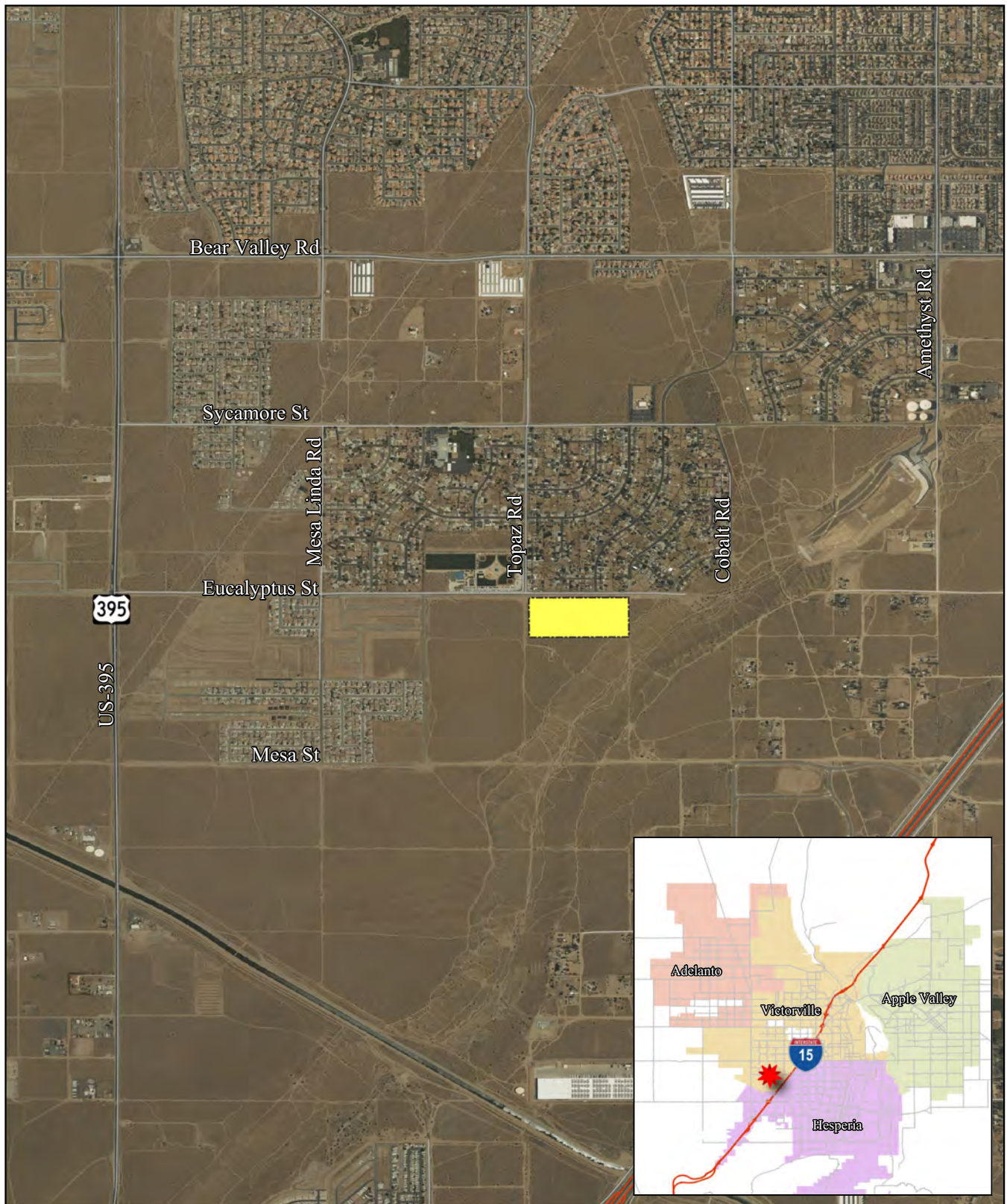
Figure 3 illustrates intersections included in the traffic study.

1.3 Analysis Scenarios

Based on discussion with City staff, this report analyzes traffic conditions under the following scenarios:

1. Existing Conditions.
2. Existing With Project Conditions.
3. Opening Year Conditions.
4. Opening Year With Project Conditions.
5. Year 2031 Conditions; and
6. Year 2031 With Project Conditions.

Consistent with the City guidelines, this report analyzes weekday a.m. and p.m. peak hour conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is defined as the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m.



Legend

 Project Site

FIGURE 1

Topaz Street and Eucalyptus Street Residential Regional Project Location



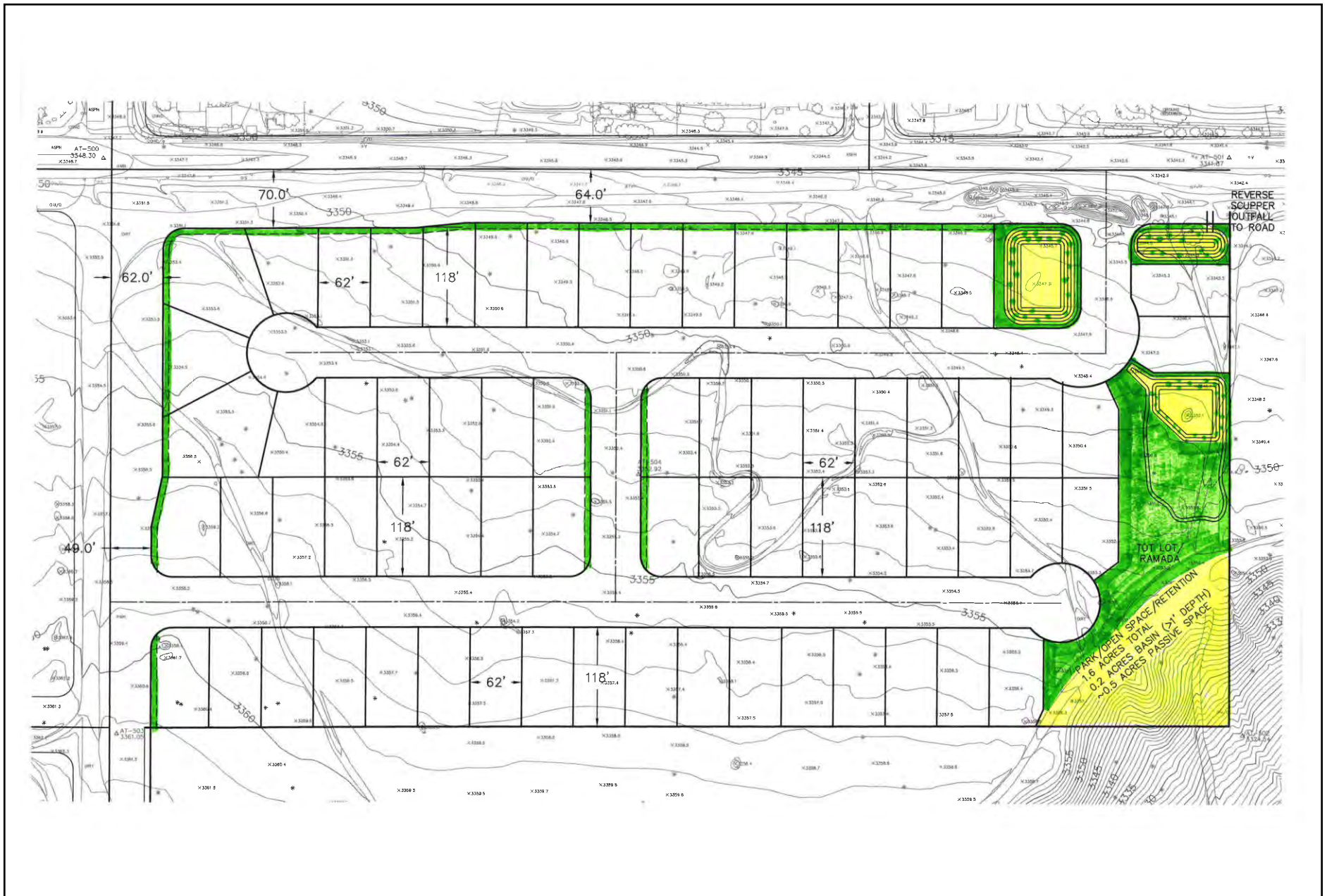
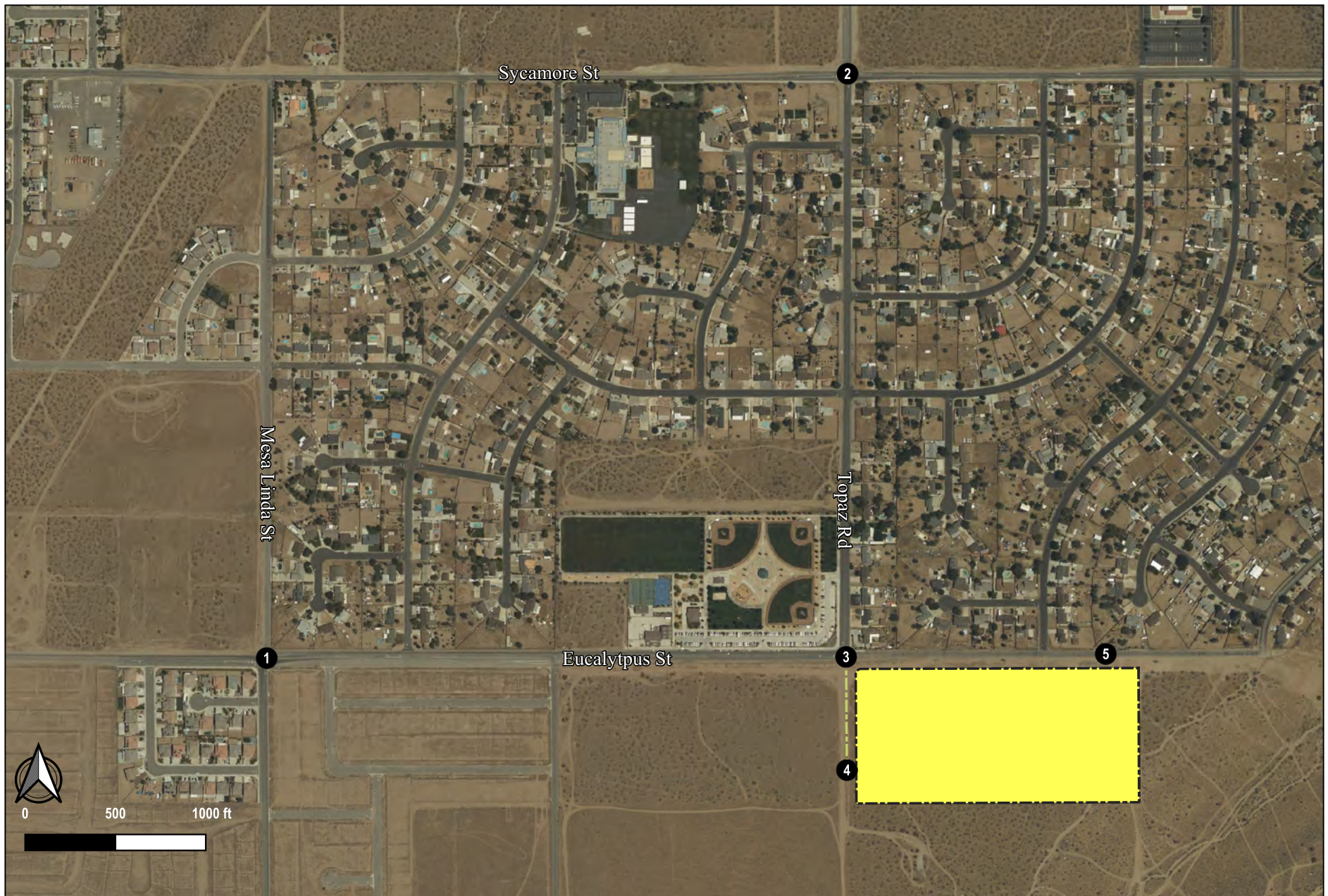


FIGURE 2

Topaz Road and Eucalyptus Street Residential
Site Plan



Legend

- Study Area Intersections
- Project Site
- Future Roadway

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FIGURE 3

Topaz Road and Eucalyptus Street Residential
Study Area Intersections

2.0 PROJECT DESCRIPTION

The project site is vacant and proposed to include 68 single-family dwelling units. Access to the project site will be provided at the intersection of Topaz Road and Eucalyptus Street, where the south leg of the intersection will be added when the project is completed. This south leg will then connect with the project street located at the new intersection of Topaz Road and Street A. Project access will also be provided to the eastside of the project at Street B and Eucalyptus Street. Figure 2 illustrates the site plan of the proposed project.

2.1 Project Trip Generation

The trip generation for the proposed project is based on the trip generation rates for Land Use 210 – “Single-Family Detached Housing” included in the Institute of Transportation Engineers’ (ITE) *Trip Generation*, 10th Edition. Table A shows the calculation of the project trip generation for the a.m. peak hour, p.m. peak hour, and weekday. As shown in Table A, the proposed project is forecast to generate 50 total trips in the a.m. peak hour, 67 total trips in the p.m. peak hour, and 642 daily trips.

2.2 Project Trip Distribution & Assignment

Trip distribution patterns for the proposed project were developed based on location of local and regional destinations. Figure 4 shows the trip distribution for project trips. The project trip generation was applied to the trip distribution patterns for the proposed project to develop trip assignments for new project trips. Figure 5 shows the project trip assignment at the study intersections.

3.0 LOS DEFINITIONS, PROCEDURES, AND THRESHOLDS

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream and is generally expressed in terms of such measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A representing excellent (free-flow) conditions and LOS F representing extreme congestion. Consistent to the guidelines, the Highway Capacity Manual (HCM) procedures have been used to evaluate levels of service. This section discusses the LOS definitions, procedures, and thresholds used in this report.

3.1 Levels of Service

The analysis of traffic operations at intersections was conducted according to the Highway Capacity Manual 6th Edition (HCM) delay methodologies, which is described in the Highway Capacity Manual (Transportation Research Board, Washington, D.C., November 2016). Under the HCM methodology, LOS for signalized intersections is based on the average delay experienced by vehicles traveling through an intersection, whereas for un-signalized intersections, the LOS is based on the worst approach where the minor leg has a shared lane and on the worst movement where the minor leg has dedicated turn lanes. Table B presents a brief description of each level of service letter grade, as well as the range of delays associated with each grade.

3.2 Levels of Service Thresholds

All study intersections are under the jurisdiction of the City of Victorville. The City of Victorville maintains that LOS for intersections shall operate at LOS D or better. Therefore, study intersections operating at LOS E, or F are required to be operate at LOS D or better.

4.0 VOLUME DEVELOPMENT METHODOLOGY

Forecast traffic volumes at study intersections were developed based on discussion with City staff and consistent with City guidelines.

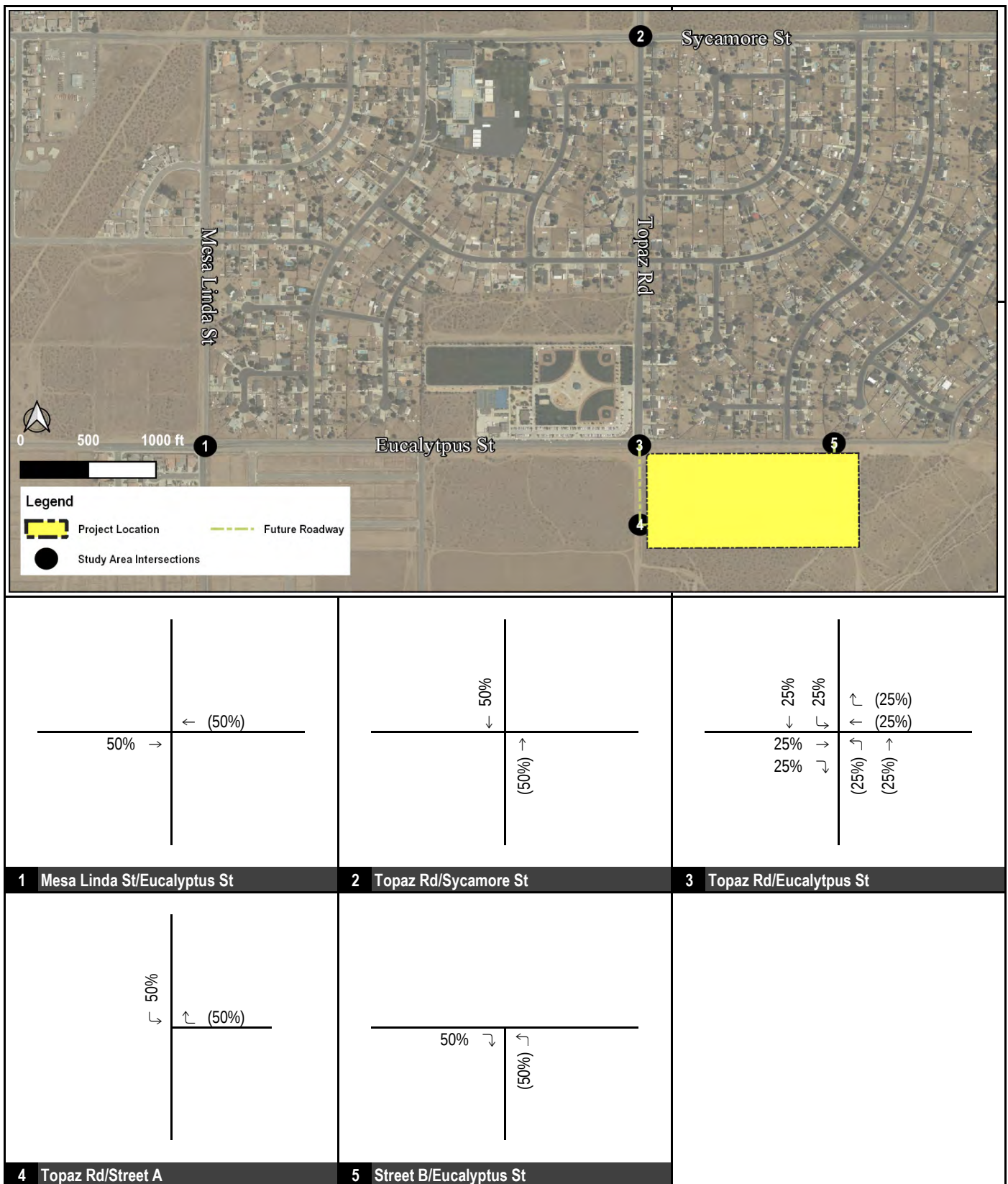


FIGURE 4

XXX%(YYY%) Inbound%(Outbound%) Percent



Topaz Road and Eucalyptus Street Residential Project Trip Distribution

Table A - Project Trip Generation

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Future Use								
Single-Family Residential								
Trip Generation Rates ¹		0.19	0.56	0.74	0.62	0.37	0.99	9.44
Trip Generation	68 DU	13	37	50	42	25	67	642
Total Trip Generation		13	37	50	42	25	67	642

Notes: DU = Dwelling Unit

¹ Trip generation based on rates for Land Use 210 - "Single-Family Detached Housing" from Institute of Transportation Engineers' (ITE) *Trip Generation* (10th Edition).

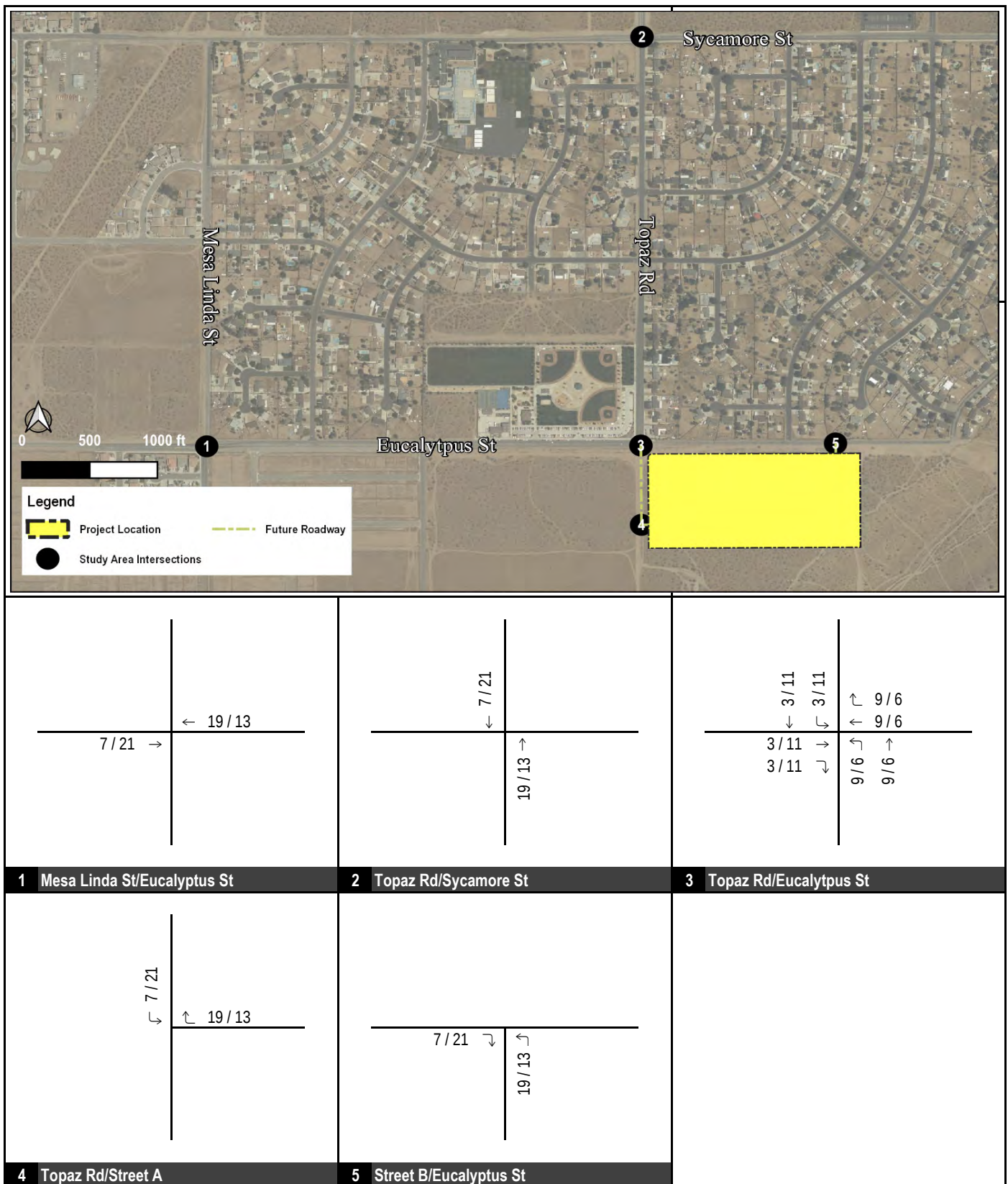


FIGURE 5

XXX / YYY AM / PM Peak Hour Trips



Topaz Road and Eucalyptus Street Residential Project Trip Assignment

Table B: Level Of Service Criteria

LOS	Description of Drivers' Perception and Traffic Operation	Delay in Seconds	
		Un-signalized	Signalized
A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤ 10	≤ 10
B	This level is assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	> 10 and ≤ 15	> 10 and ≤ 20
C	This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 15 and ≤ 25	> 20 and ≤ 35
D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective, or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	> 25 and ≤ 35	> 35 and ≤ 55
E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	> 35 and ≤ 50	> 55 and ≤ 80
F	This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 50	> 80

Source: *Highway Capacity Manual, 6th Edition*

4.1 Existing Traffic Volumes

Existing traffic volumes are based on peak hour intersection turn movement counts collected by Counts Unlimited Inc. in December 2020. Due to the Covid-19 pandemic, the peak hour traffic volumes at the study area intersections collected in December 2020 may be less than counts collected before the pandemic. Therefore, a comparison of historic counts from October 2018 to the counts collected in December 2020 was conducted. To provide an apples-to-apples comparison of the 2018 to 2020 volumes, a growth rate of 2 percent for two years (2018 to 2020) was applied to the 2018 volumes. This "new" 2020 volume represents the peak hour traffic volumes before the Covid-19 pandemic. Table C shows the comparison of the traffic volumes at the west legs of Mesa Linda Drive/Eucalyptus Street and Topaz Road/Eucalyptus Street. As shown in Table C, the Mesa Linda Drive/Eucalyptus Street traffic volumes in December 2020 are 72 vehicles less in the a.m. peak hour and 42 vehicles less in the p.m. peak hour when compared to the 2018 volumes. The Topaz Road/Eucalyptus Street traffic volumes in December 2020 are 46 vehicles less in the a.m. peak hour and 48 vehicles less in the p.m. peak hour when compared to the 2018 volumes. Therefore, a growth rate of 70.3 percent in the a.m. peak hour and 29.5 percent was applied to the December 2020 peak hour volumes to derive the pre-Covid-19 pandemic peak hour traffic volumes at the study area intersections. Count sheets are contained in Appendix A. Detailed volume development worksheets are included in Appendix B.

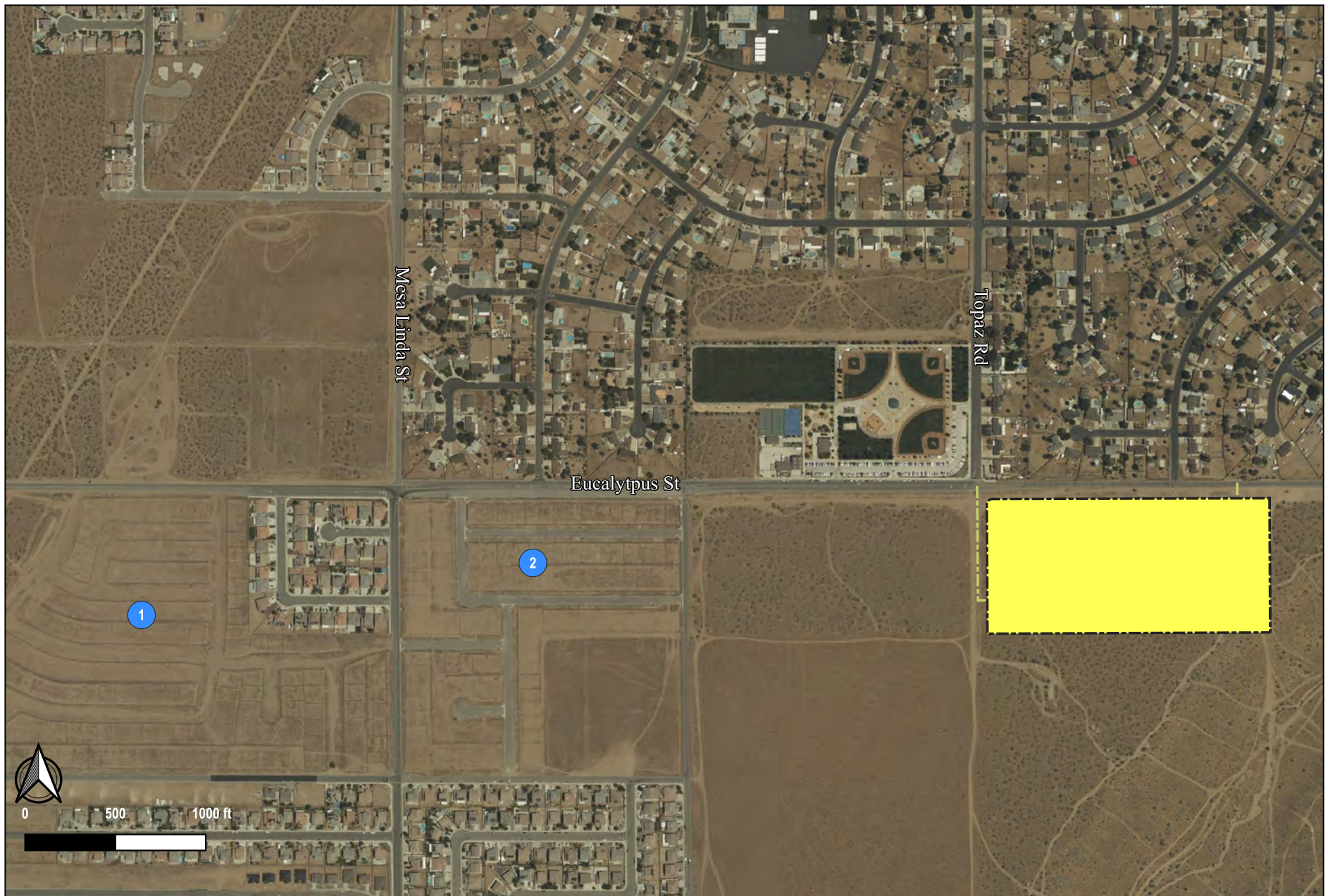
4.2 Opening Year Traffic Volumes

Opening year peak hour traffic volumes were developed by applying an annual growth rate of 2 percent per year (2020 to 2022) to the existing volumes and adding cumulative project trips at each study intersection. The cumulative projects were determined from the City of Victorville development activity. Figure 6 shows the cumulative project locations. Table D lists the cumulative projects included in the analysis. As shown in Table D, the cumulative projects are anticipated to generate 327 a.m. peak hour trips, 438 p.m. peak hour trips, and 4,172 daily trips. Detailed volume development worksheets are included in Appendix B.

Table C: Existing Volume Comparison (2018 to 2020)

Analysis Period	Mesa Linda Drive/Eucalyptus St (West Leg)					
	October 2018			December 2020	Difference from 2018 to 2020	Growth Percentage for 2020
	Total Volume (Approach/Departure)	2018 to 2020 Growth	2018 to 2020 Total	Total Volume (Approach/Departure)		
AM Peak Hour	167	7	174	102	72	70.3%
PM Peak Hour	200	8	208	166	42	25.3%

Analysis Period	Topaz Road/Eucalyptus St (West Leg)						
	October 2018			December 2020		Difference from 2018 to 2020	Growth Percentage for 2020
	Total Volume (Approach/Departure)	2018 to 2020 Growth	2018 to 2020 Total	Total Volume (Approach/Departure)			
AM Peak Hour	114	5	119	73		46	62.4%
PM Peak Hour	203	8	211	163		48	29.5%



Legend

- Study Area Intersections
- Project Site
- Future Roadway
- Cumulative Projects



FIGURE 6

Topaz Road and Eucalyptus Street Residential
Cumulative Project Locations

Table D: Cumulative Projects Trip Generation

Project Number	Project Land Use	Quantity	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
				In	Out	Total	In	Out	Total	
1	Single-Family Residential ¹⁶									
	Trip Generation Rates	325	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
	Trip Generation			60	180	241	203	119	322	3,068
2	Single-Family Residential ¹⁶									
	Trip Generation Rates	117	DU	0.19	0.56	0.74	0.62	0.37	0.99	9.44
	Trip Generation			22	65	87	73	43	116	1,104
Total Trip Generation				82	245	327	276	162	438	4,172

Notes: DU = Dwelling Units

¹ Rates based on Land Use 210 - "Single-Family Detached Housing" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.).

4.2 Year 2031 Traffic Volumes

Year 2031 peak hour traffic volumes were developed through linear interpolation of the SBTAM from year 2031 to year 2040 loaded network model plots. Detailed volume development worksheets are included in Appendix B.

4.3 Existing, Opening Year, and Year 2031 With Project Traffic Volumes

Traffic volumes for existing, opening year, and year 2031 with project conditions were developed by adding the trip assignment to the corresponding (i.e., existing, opening year, and year 2031) without project peak hour traffic volumes.

5.0 EXISTING CONDITIONS

This section discusses the existing transportation conditions in the study area.

5.1 Existing Roadway Conditions

Regional access to the project site is provided by US-395 to the west and Interstate 15 to the east. Local access to the project will be provided by the following roadways:

- **Eucalyptus Street** is oriented in the east-west direction and is as a 2-lane roadway.
- **Topaz Road** is oriented in the north-south direction and is a 2-lane roadway.
- **US-395** is oriented in a north-south direction and is a 4-lane roadway.
- **Sycamore Street** is oriented in the east-west direction and is 2-lane roadway.

5.2 Existing Transit Service

Public transportation services within the City of Victorville and near the proposed project include bus transit service provided by the Victor Valley Transit Authority. The bus service is further described below.

Bus Service. Bus service in the vicinity of the project is provided by Route 21W and Route 54.

- Route 21W travels along Bear Valley Road in the project vicinity and operates at 120-minute headways on weekdays and weekends. Major stops include the Victor Valley Mall and Wrightwood Community Center. The closest stop near the project is located at the northeast corner of Topaz Road and Bear Valley Road.
- Route 54 travels along Bear Valley Road in the project vicinity and operates at 60-minute headways on weekdays and weekends. Major stops include the Victor Valley Mall. The closest stop near the project is located at the northeast corner of Topaz Road and Bear Valley Road.

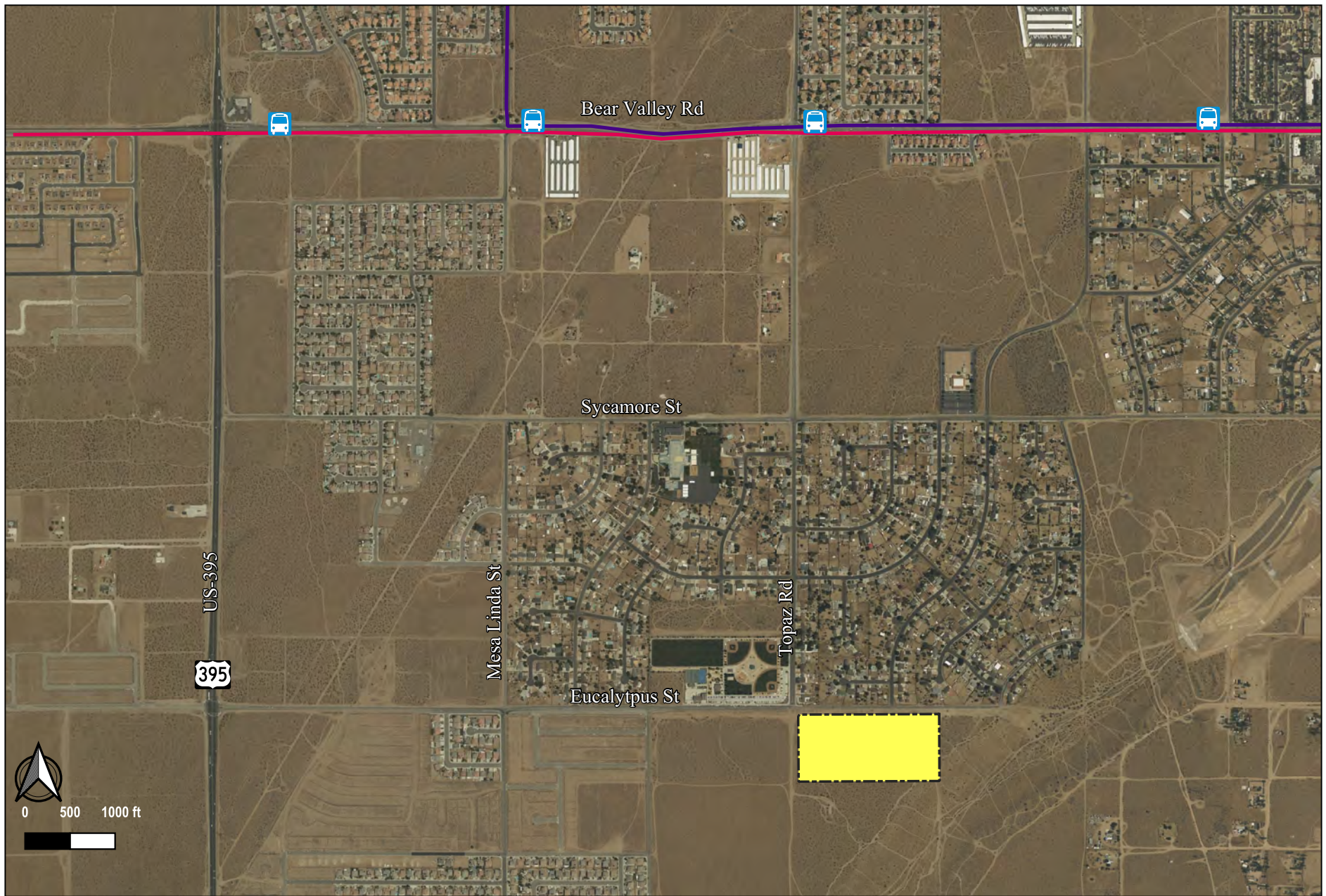
Figure 7 illustrates the existing transit services. As shown in Figure 7, the closet transit routes to the project are located on Bear Valley via Routes 21W and Route 54.

5.3 Existing Pedestrian & Bicycle Facilities

The City's bikeway network includes three types of facilities and are discussed below:

- **Class I bikeways** also known as "bike paths", provide a complete separate right-of-way designated for exclusive use of bicycles and pedestrians with minimum cross flows by motorists. They are shared use paths that may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.
- **Class II bikeways** also known as "bike lanes", provide a restricted right-of-way designated for exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with permitted vehicle parking and cross flows by pedestrians and motorists. This portion of roadway is designated by striping, signing, pavement delineation, and pavement markings for preferential or exclusive use of bicyclists.
- **Class III bikeways** also known as "bike routes", provide a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists.

The project site is currently vacant, with no bike lanes on the adjacent streets. Pedestrian circulation in Victorville is primarily provided via sidewalks. There are no sidewalks on either side of Eucalyptus Street with the exception of the



Legend

 Project Site  21  54  Bus Stop



FIGURE 7

Topaz Road and Eucalyptus Street Residential
Transit Routes

northeast corner of Topaz Road and Eucalyptus Street. Figure 8 illustrates the City of Victorville non-motorized transportation plan.

5.4 Existing Intersections Levels of Service

An intersection level of service analysis was conducted for existing conditions to determine current circulation system performance. Figure 9 shows the lane geometrics and stop controls at the study intersections. The existing traffic volumes at study intersections are illustrated in Figure 10. Detailed volume development worksheets are included in Appendix B. The existing levels of service for the study area intersections are summarized in Table E. Level of service calculation worksheets are contained in Appendix C. As shown in Table E, all study area intersections are currently operating at satisfactory levels of service.

5.5 Existing With Project Intersections Levels of Service

An intersection level of service analysis was conducted for existing with project conditions to determine circulation system performance. Existing with project traffic volumes at study intersections are shown in Figure 11. The existing with project levels of service for the study area intersections are summarized in Table E. Level of service calculation worksheets are contained in Appendix C. As shown in Table E, all study area intersections are forecast to operate at satisfactory levels of service.

6.0 OPENING YEAR CONDITIONS

This section discusses opening year transportation conditions in the study area. It is anticipated that the project will open in 2022.

6.1 Opening Year Roadway Conditions

Opening year roadway conditions are assumed to be the same as those under existing conditions.

6.2 Opening Year Transit Service

Transit services under opening year conditions are anticipated to remain the same as under existing conditions.

6.3 Opening Year (2020) Pedestrian & Bicycle Facilities

Pedestrian and bicycle facilities area anticipated to remain the same as under existing conditions.

6.4 Opening Year Intersections Levels of Service

An intersection level of service analysis was conducted for opening year conditions to determine circulation system performance. Opening year traffic volumes at study intersections are shown in Figure 12. Opening year levels of service for the study area intersections are summarized in Table F. Detailed volume development worksheets are included in Appendix B. Level of service calculation worksheets are contained in Appendix C. As shown in Table F, all study area intersections are forecast to operate at satisfactory levels of service.

6.5 Opening Year With Project Intersections Levels of Service

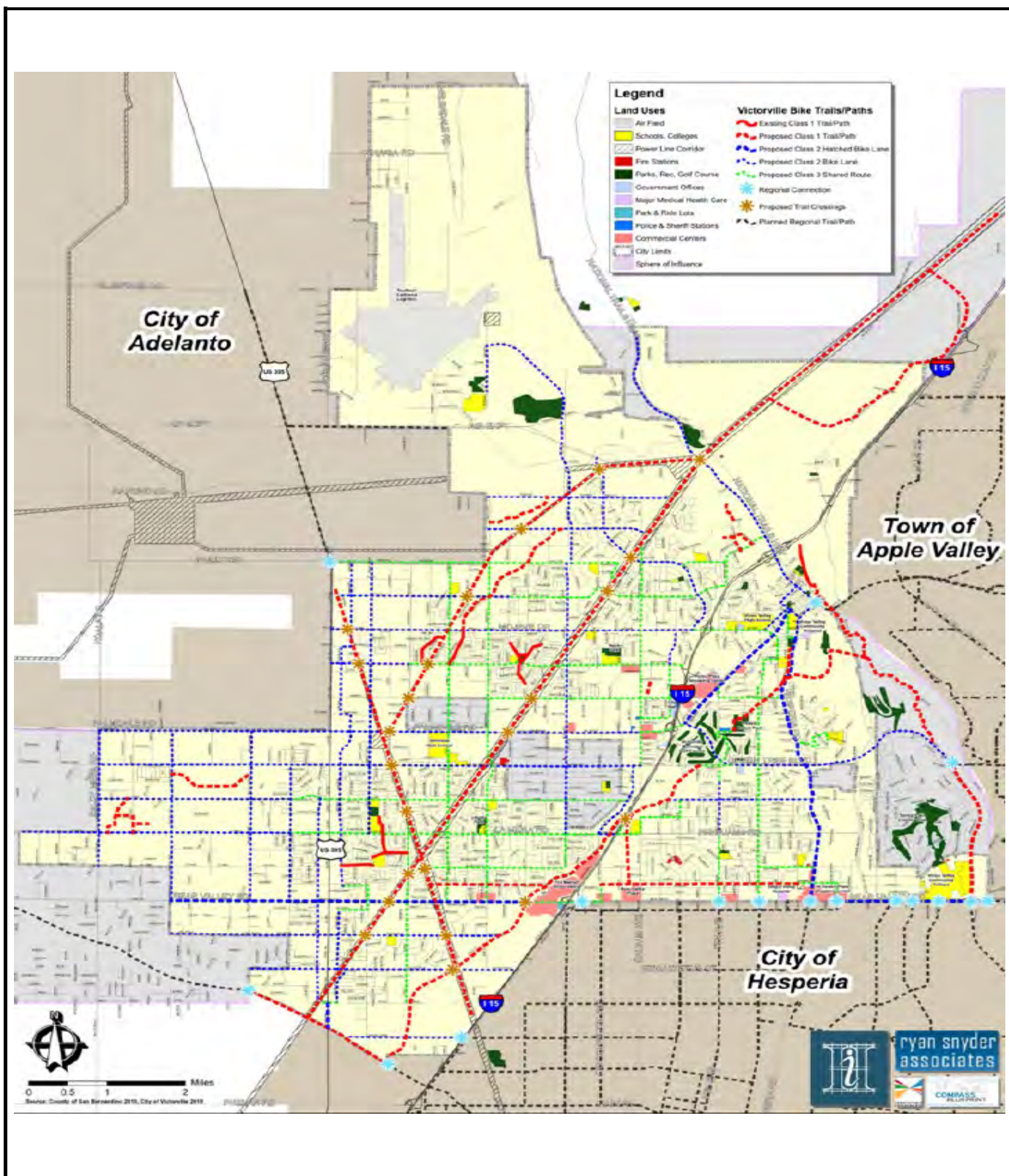
An intersection level of service analysis was conducted for opening year with project conditions to determine circulation system performance. Opening year with project traffic volumes at study intersections are shown in Figure 13. The opening year with project levels of service for the study area intersections are summarized in Table F. Level of service calculation worksheets are contained in Appendix C. As shown in Table F, all study area intersections are forecast to operate at satisfactory levels of service.

7.0 YEAR 2031 CONDITIONS

This section discusses year 2031 transportation conditions in the study area.

7.1 Year 2031 Roadway Conditions

Year 2031 roadway conditions are assumed to be the same as those under opening year conditions.



Source: City of Victorville General Plan

FIGURE 8

Topaz Road and Eucalyptus Street Residential City of Victorville Non-Motorized Transportation Plan



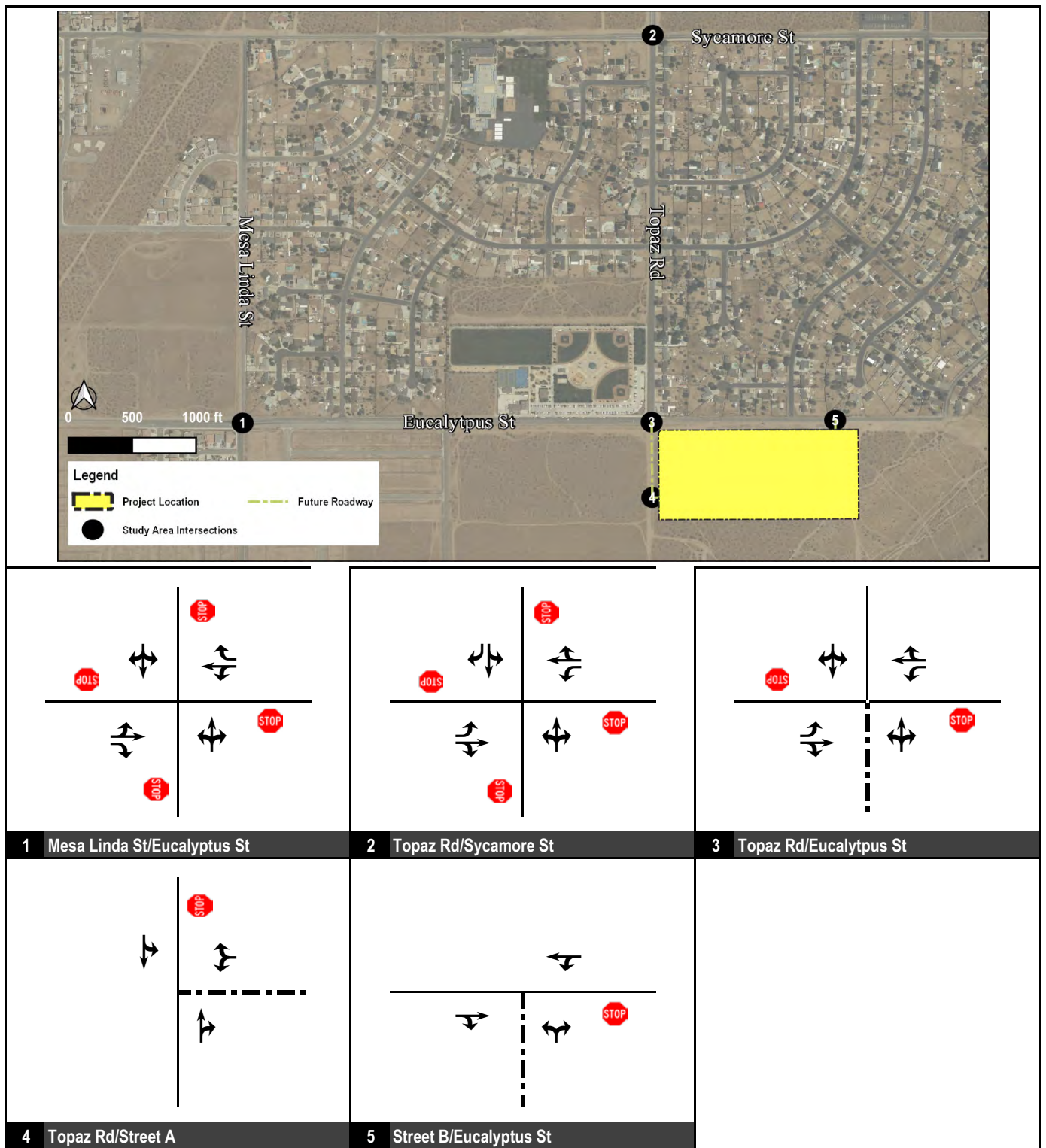


FIGURE 9

Legend



Signal



Stop Sign



With Project Roadway

**Topaz Road and Eucalyptus Street Residential
Existing With Project Intersection Lane Geometrics and Stop Control**

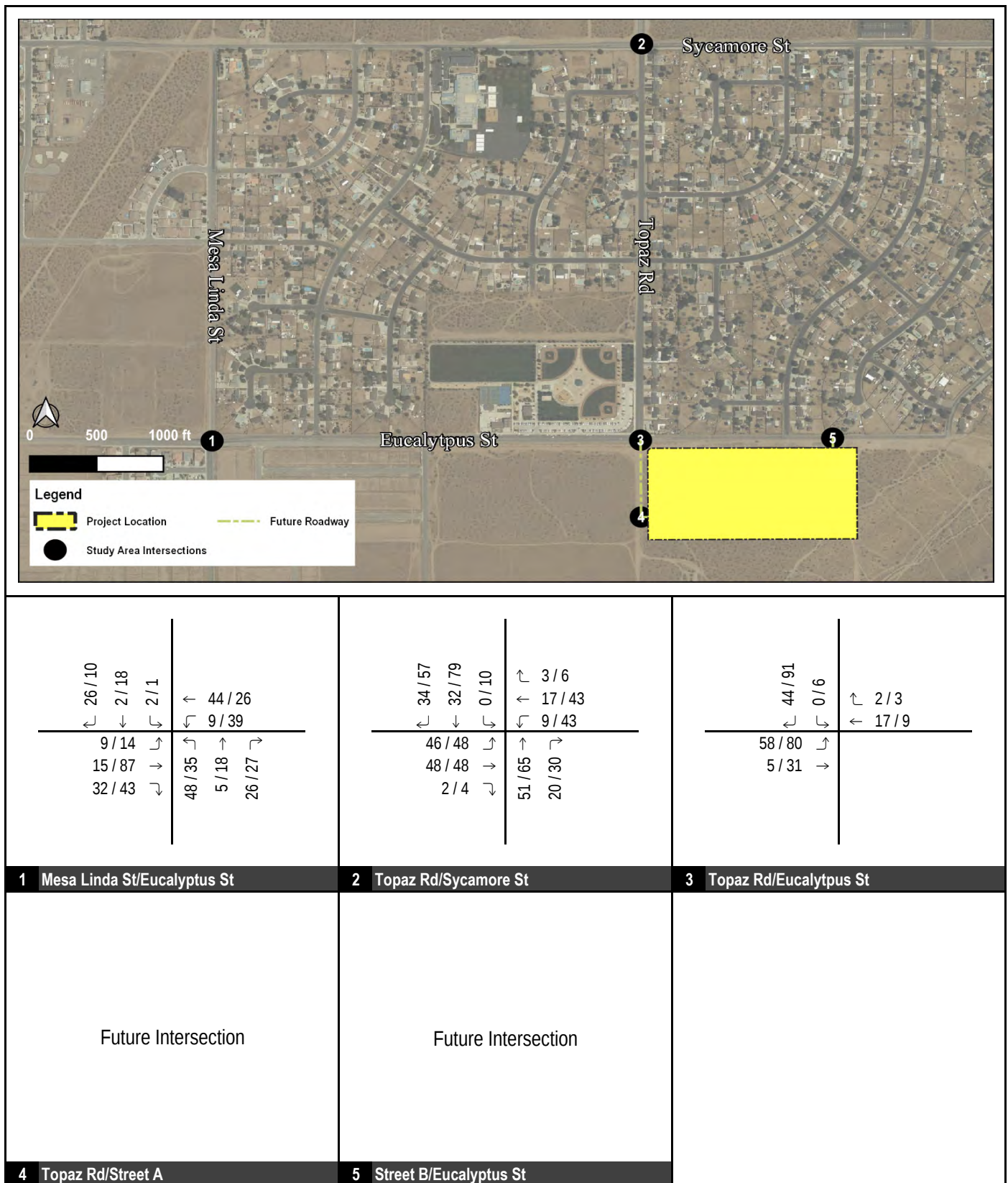


FIGURE 10

XXX / YYY AM / PM Peak Hour Traffic Volumes

Topaz Road and Eucalyptus Street Residential Existing Peak Hour Traffic Volumes



Table E: Existing Intersection Levels of Service

Intersection	LOS Std.	Control	Without Project						With Project					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS
1 . Mesa Linda St/Eucalyptus St	D	AWSC	7.5		A	8		A	7.7		A	8.2		A
2 . Topaz Rd/Sycamore St	D	AWSC	8.1		A	8.7		A	8.2		A	8.9		A
3 . Topaz Rd/Eucalyptus St	D	TWSC	8.6		A	8.9		A	10.8		B	11.4		B
4 . Topaz Rd/Street A	D	TSWC	<i>Future Intersection</i>						0		A	0		A
5 . Street B/Eucalyptus St	D	TWSC	<i>Future Intersection</i>						8.7		A	8.9		A

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

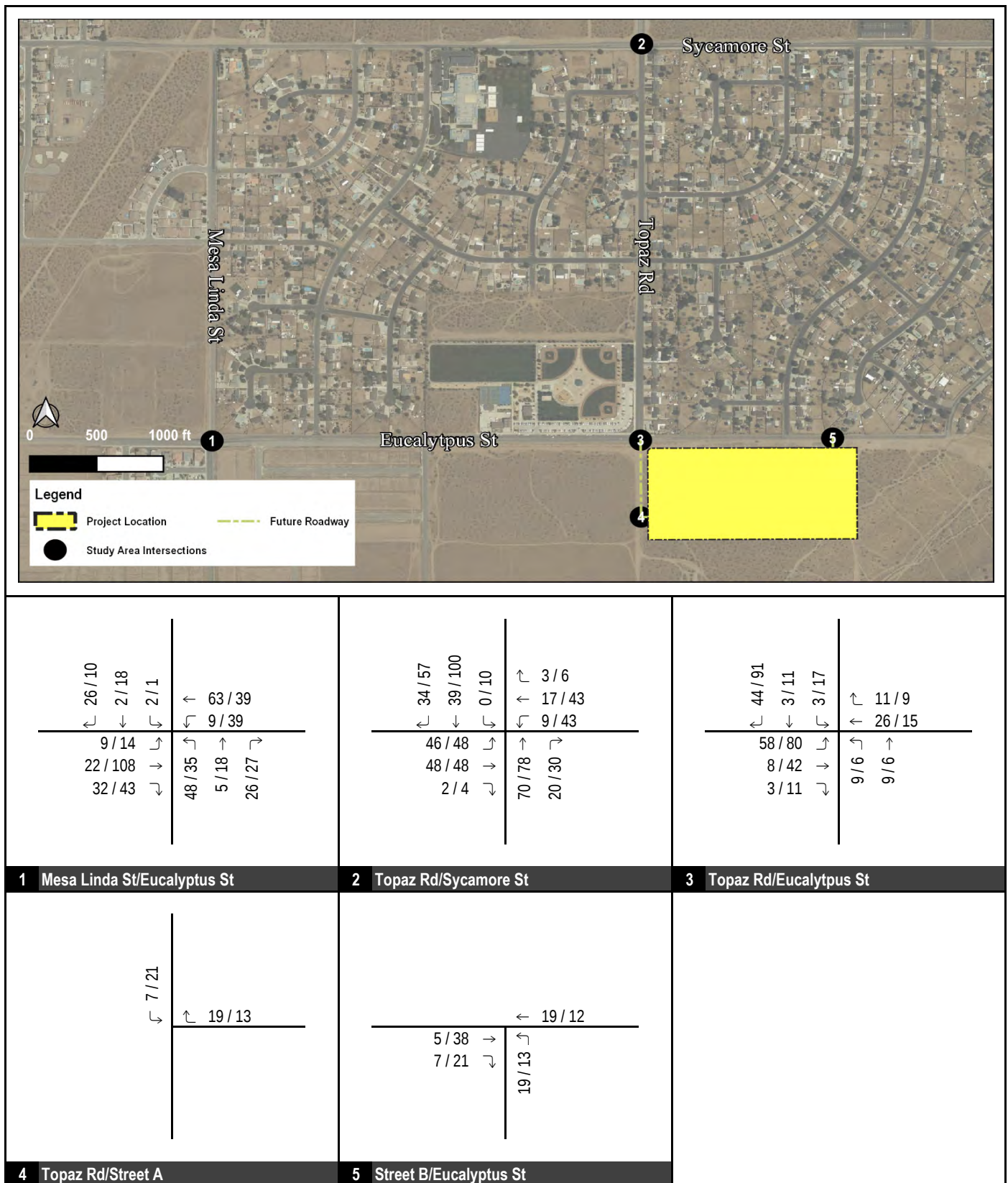


FIGURE 11

XXX / YYY AM / PM Peak Hour Traffic Volumes



**Topaz Road and Eucalyptus Street Residential
Existing With Project Peak Hour Traffic Volumes**

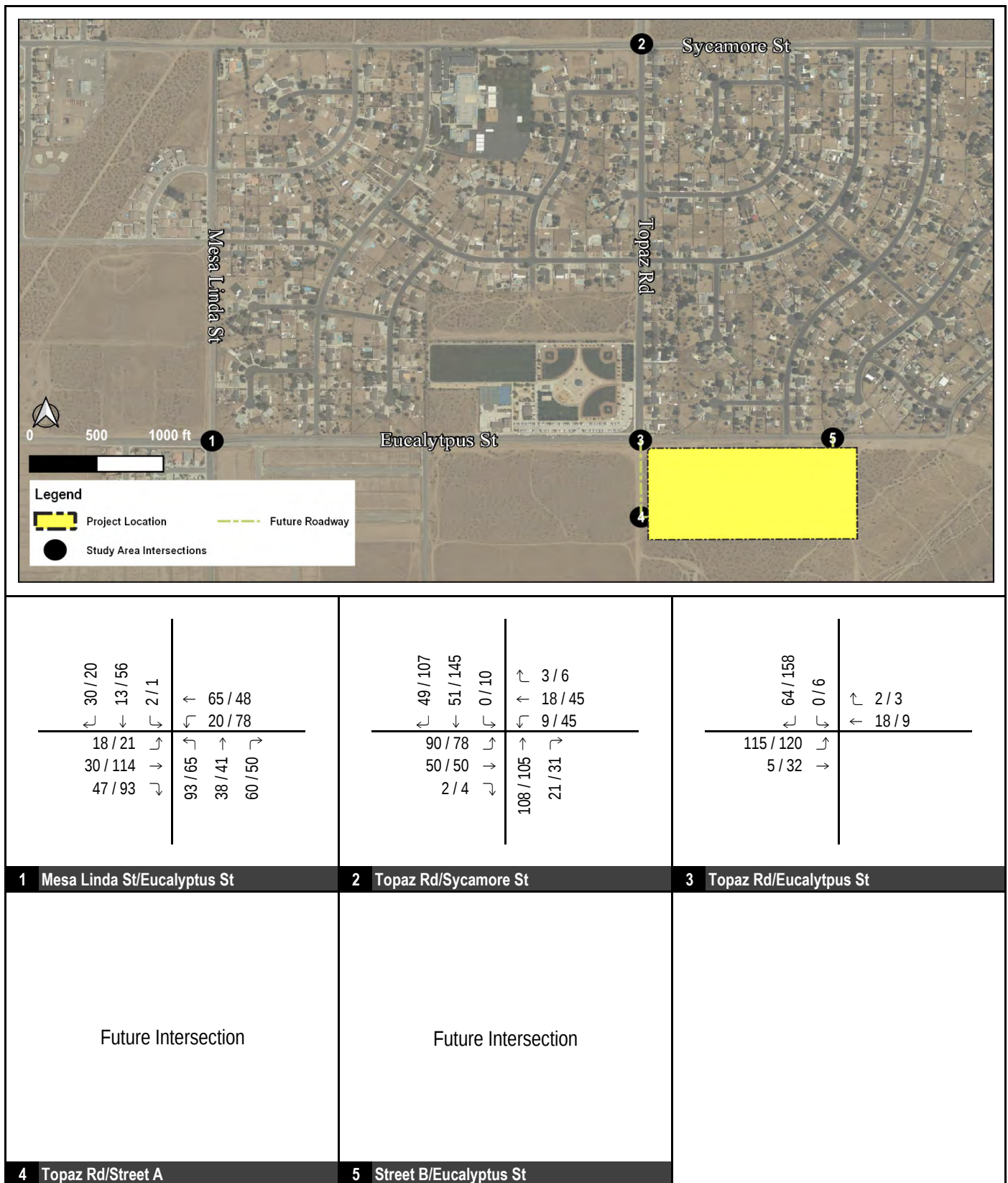


FIGURE 12

XXX / YYY AM / PM Peak Hour Traffic Volumes

Topaz Road and Eucalyptus Street Residential Opening Year Peak Hour Traffic Volumes



Table F: Opening Year Intersection Levels of Service

Intersection	LOS Std.	Control	Without Project						With Project					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS
1 . Mesa Linda St/Eucalyptus St	D	AWSC	8.6		A	9.1		A	8.8		A	9.3		A
2 . Topaz Rd/Sycamore St	D	AWSC	8.9		A	9.8		A	9.1		A	10.1		B
3 . Topaz Rd/Eucalyptus St	D	TSWC	8.7		A	9.2		A	12.8		B	13.1		B
4 . Topaz Rd/Street A	D	TSWC	<i>Future Intersection</i>						0		A	0		A
5 . Street B/Eucalyptus St	D	TWSC	<i>Future Intersection</i>						8.7		A	8.9		A

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

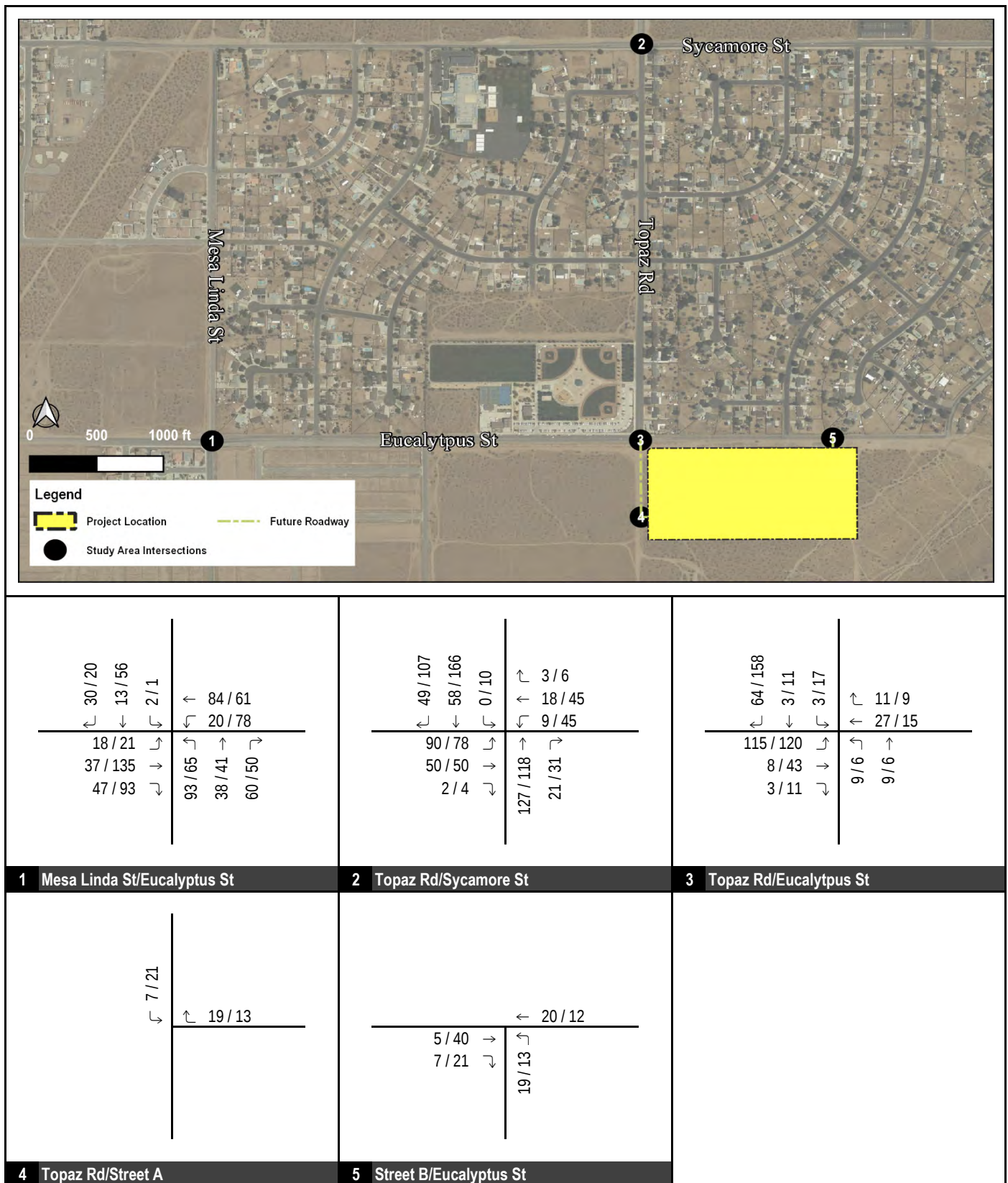


FIGURE 13

XXX / YYY AM / PM Peak Hour Traffic Volumes



Topaz Road and Eucalyptus Street Residential Opening Year With Project Peak Hour Traffic Volumes

7.2 Year 2031 Transit Service

Transit services under opening year conditions are anticipated to remain the same as under existing conditions.

7.3 Year 2031 Pedestrian & Bicycle Facilities

Proposed pedestrian and bicycle facilities are included in the City of Victorville non-motorized transportation plan shown in Figure 8. As shown in Figure 8, the following facilities are in the vicinity of the project:

- Proposed Class III Shared Route on Topaz Road from Mesa Street to north of Bear Valley Road.
- Proposed Class II Bike Lane on Eucalyptus Street from Cobalt Road to west of US-395.
- Proposed Class I Trail/Path from the California Aqueduct south of Smoketree Road, generally to the northeast and north of Eucalyptus Street.

7.4 Year 2031 Intersections Levels of Service

An intersection level of service analysis was conducted for year 2031 conditions to determine circulation system performance. Year 2031 traffic volumes at study intersections are shown in Figure 14. Year 2031 levels of service for the study area intersections are summarized in Table G. Detailed volume development worksheets are included in Appendix B. Level of service calculation worksheets are contained in Appendix C. As shown in Table G, all study area intersections are forecast to operate at satisfactory levels of service.

7.5 Year 2031 With Project Intersections Levels of Service

An intersection level of service analysis was conducted for year 2031 with project conditions to determine circulation system performance. Year 2031 with project traffic volumes at study intersections are shown in Figure 15. The year 2031 with project levels of service for the study area intersections are summarized in Table G. Level of service calculation worksheets are contained in Appendix C. As shown in Table G, all study area intersections are forecast to operate at satisfactory levels of service.

8.0 SIGNAL WARRANTS

Peak hour signal warrants were conducted for the study area intersections under existing, opening year, and year 2031 without and with project conditions. The peak hour warrants are based on 2013 California Manual of Uniform Traffic Control Devices (Warrant 3 – Peak Hour). The peak hour warrants are included in Appendix D and show that none of the study area intersections meet a signal warrant under existing, opening year, and year 2031 without and with project conditions.

9.0 VEHICLE MILES TRAVELED (VMT) SCREENING ANALYSIS

Based on the Victorville Vehicle Miles Traveled Analysis Guidelines, June 2020, projects that will not require a VMT analysis and can be screened out by using either the daily vehicle trips generated by the project or the project's lane use type. The following screening thresholds are included in the City Guidelines for projects that can be assumed to have less than significant impacts under CEQA:

Daily Vehicle Trip thresholds

The project results in a net increase of 1,285 or less weekday daily trips. The Institute of Transportation Engineers (ITE) *Trip Generation Manual*, latest edition will be used to estimate the daily trip generation. If the ITE *Trip Generation Manual* does not have studies specific to a land use, other trip generation traffic studies may be used.

Land Use Types

The following land use types will be used for screening:

- Single-family or Multifamily Residential – 136 dwelling units or less
- Office – 227,000 square feet
- Retail – 122,000 square feet
- Warehousing – 829,000 square feet
- Light Industrial – 296,000 square feet

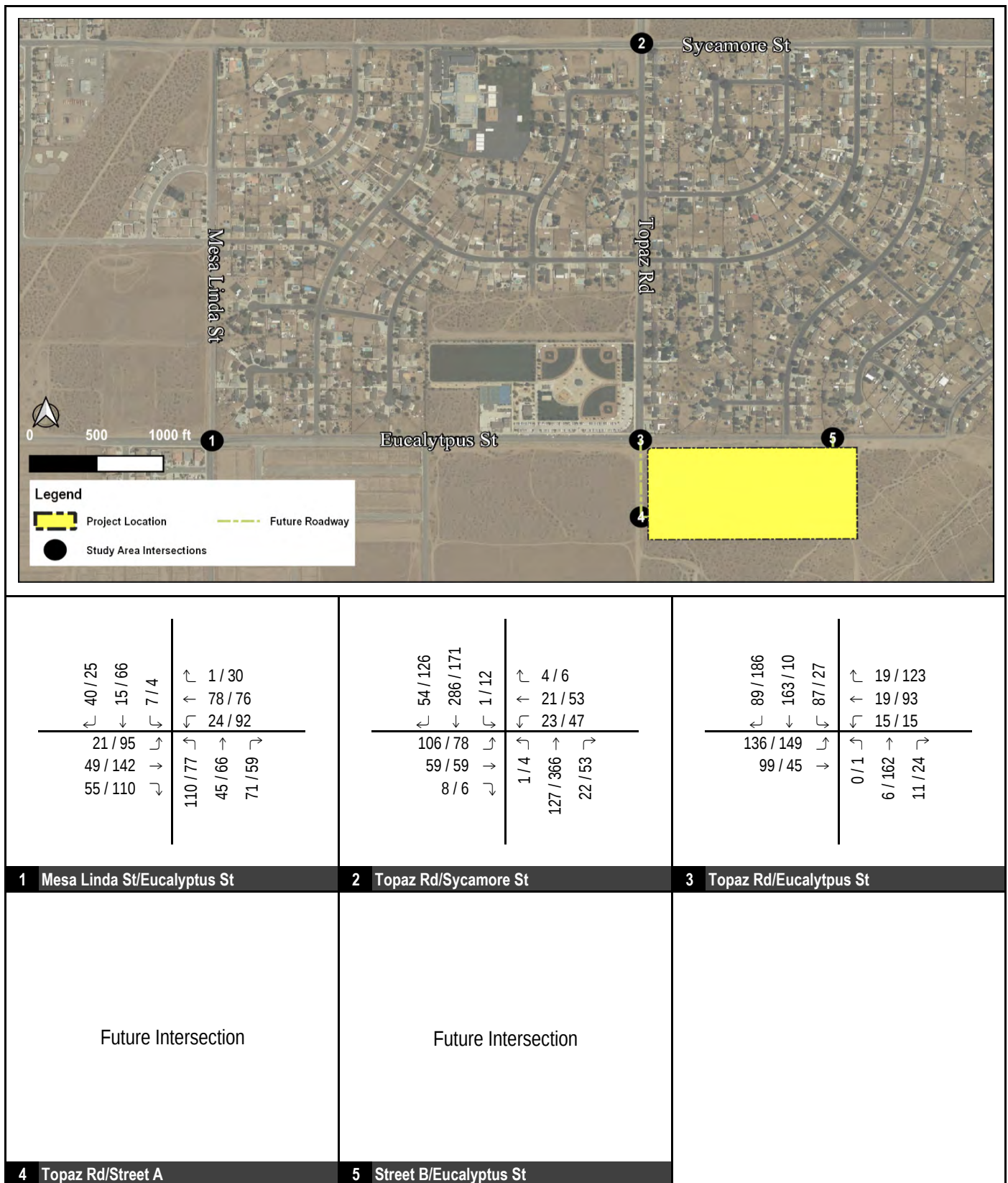


FIGURE 14

XXX / YYY AM / PM Peak Hour Traffic Volumes

Topaz Road and Eucalyptus Street Residential Year 2031 Peak Hour Traffic Volumes



Table G: Year 2031 Intersection Levels of Service

Intersection	LOS Std.	Control	Without Project						With Project					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS
1 . Mesa Linda St/Eucalyptus St	D	AWSC	9		A	11		B	9.1		A	11.4		B
2 . Topaz Rd/Sycamore St	D	AWSC	11		B	15.7		C	11.2		B	16.6		C
3 . Topaz Rd/Eucalyptus St	D	TSWC	23.9		C	24		C	26.6		D	27.3		D
4 . Topaz Rd/Street A	D	TSWC			<i>Future Intersection</i>				8.4		A	9.3		A
5 . Street B/Eucalyptus St	D	TWSC			<i>Future Intersection</i>				10.1		B	10.7		B

Notes:

* Exceeds LOS Standard

TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case movement.

LOS = Level of Service

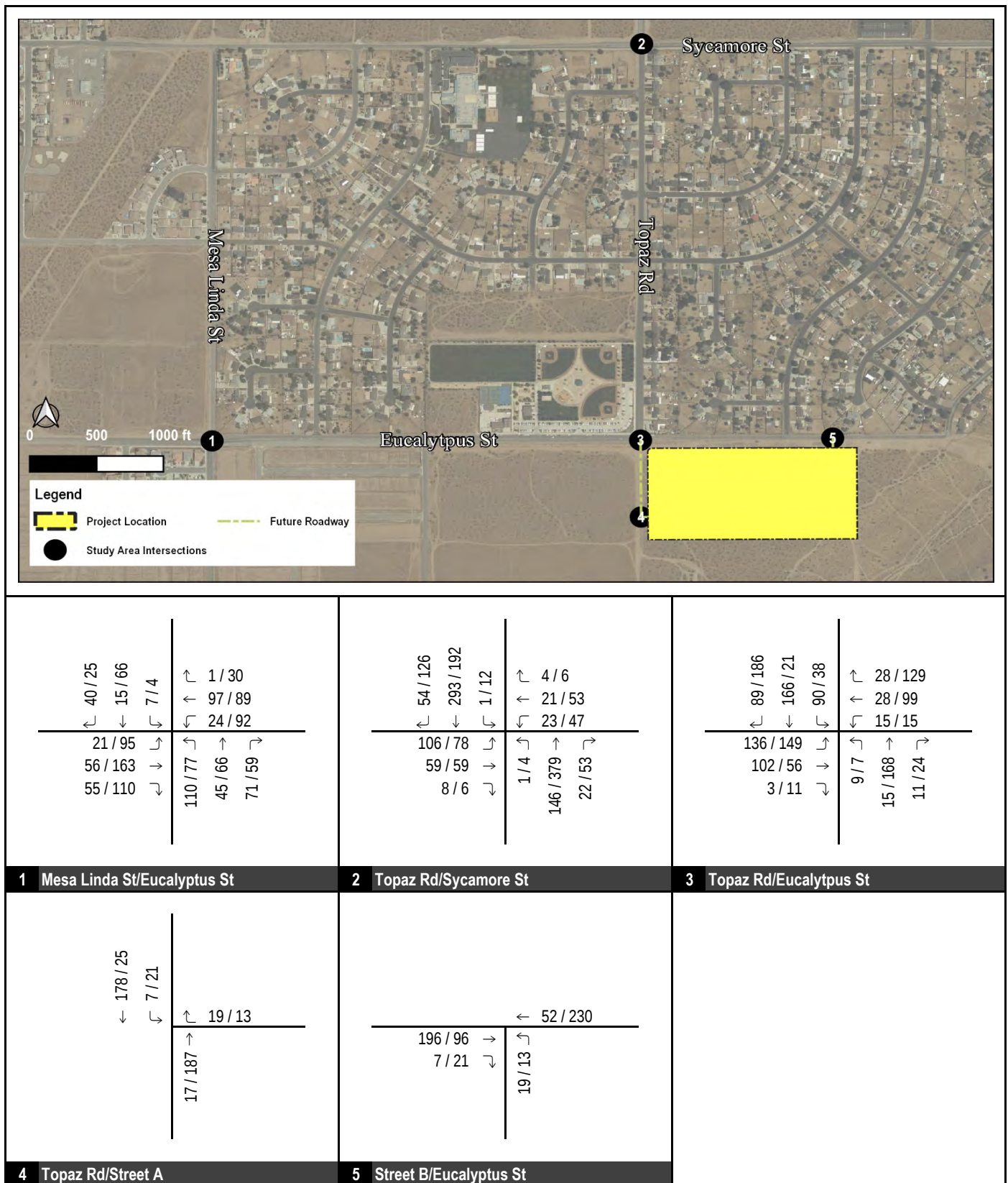


FIGURE 15

XXX / YYY AM / PM Peak Hour Traffic Volumes

**Topaz Road and Eucalyptus Street Residential
Year 2031 With Project Peak Hour Traffic Volumes**



- K-12 Public School
- Daycare/Childcare/Pre-K
- Affordable Housing
- Student Housing
- Community Institutions, Social Services and Public Buildings

Based on the daily project trip generation shown in Table A, the project is forecast to generate 642 daily trips. Based on the Daily Vehicle Trip Thresholds in Screening Tool 1, the project generates less than the 1,285 weekday daily trips and will not require a full VMT analysis.

In addition, the project description includes 68 single-family residential dwelling units. Based on the Land Use Types Screening Tool 2, the project includes less than 136 Single-Family dwelling units and will not require a full VMT analysis.

Based on the VMT Screening Tools 1 and 2, the project will not require a full VMT analysis and will therefore have a less than significant impact under CEQA.

10.0 IMPACT CRITERIA FOR CEQA DETERMINATION

This section evaluates the CEQA checklist for impact evaluation.

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project is consistent with the City's adopted plans and policies. With implementation of the recommended improvements, the project has less than significant impacts based on the City's impact criteria. The project would not conflict with adopted policies supporting alternative transportation modes. The project will not change roadway designations from those in the City's General Plan. The project will also not result in removal of any of the facilities listed above. Therefore, the project impact is considered less than significant.

B. Conflict or be inconsistent with CEQA Guidelines 15064.3, subdivision (b)?

Based on the City's VMT Screening Tools 1 and 2, the project will not require a full VMT analysis and will therefore have a less than significant impact under CEQA.

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The design of driveways and other project access locations will be based on City Code, which sets the standard for such design. It is not anticipated that traffic hazards will increase, therefore, the project impact is considered less than significant.

D. Result in inadequate emergency access?

The proposed driveways will be designed in accordance with all applicable design and safety standards required by adopted fire codes, safety codes, and building codes established by the City's Engineering and Fire Departments. The project will not increase delays on street segments substantially, therefore, the project will not result in inadequate emergency access, and the project impact is considered less than significant.

11.0 SUMMARY & CONCLUSIONS

The proposed project is forecast to generate 50 new trips in the a.m. peak hour, 67 new trips in the p.m. peak hour, and 642 new daily trips. Based on the intersection and the LOS analysis, all intersections are currently operating at satisfactory LOS and are anticipated to operate at satisfactory LOS under existing, opening year, and year 2031 without and with project conditions.

Based on the Daily Vehicle Trip Thresholds in Screening Tool 1, the project generates less than the 1,285 weekday daily trips and will not require a full VMT analysis. In addition, the project description includes 68 single-family residential dwelling units. Based on the Land Use Types Screening Tool 2, the project includes less than 136 Single-Family dwelling units and will not require a

full VMT analysis. Based on the VMT Screening Tools 1 and 2, the project will not require a full VMT analysis and will therefore have a less than significant impact under CEQA.

APPENDIX A: TRAFFIC COUNTS

City of Victorville
N/S: Mesa Linda Street
E/W: Eucalyptus Street
Weather: Clear

File Name : 01_VIC_Mesa Linda_Eucalyptus AM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 1

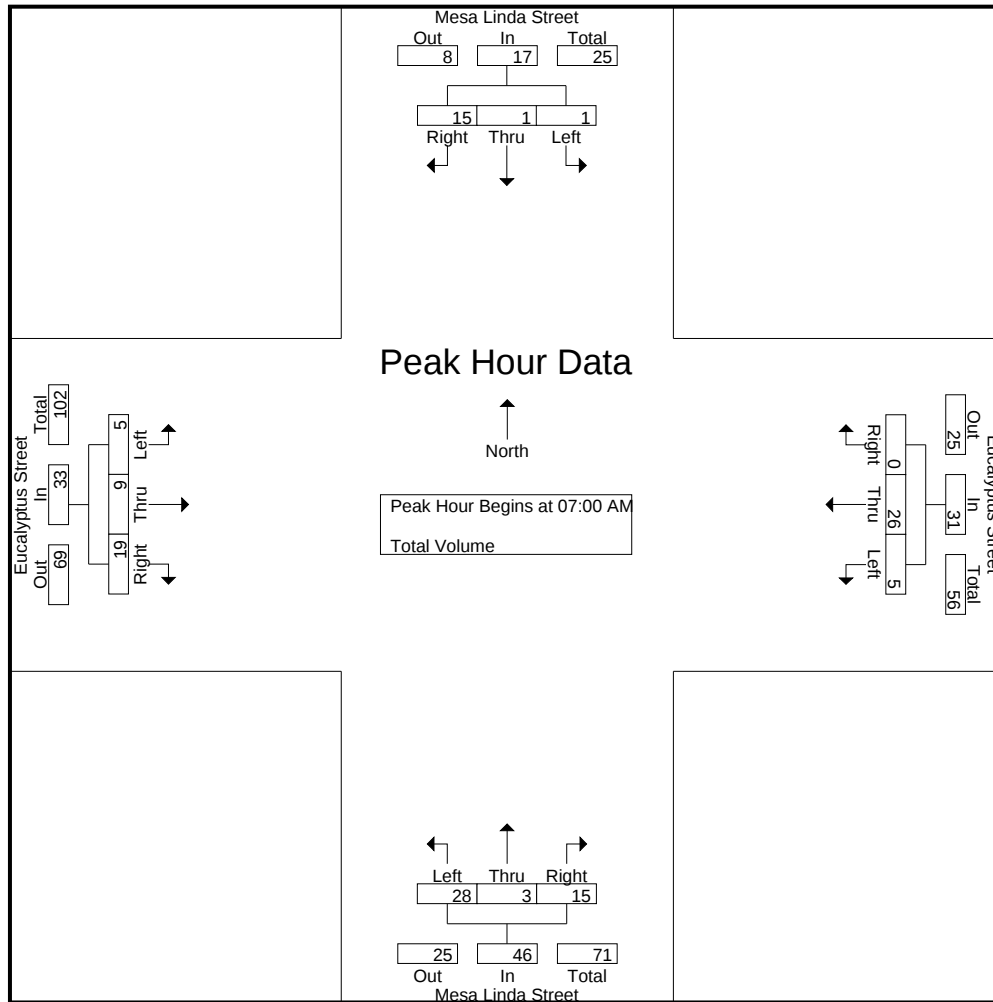
Groups Printed- Total Volume

	Mesa Linda Street Southbound				Eucalyptus Street Westbound				Mesa Linda Street Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	4	4	0	6	0	6	7	2	1	10	0	1	7	8	28
07:15 AM	0	0	4	4	2	7	0	9	6	0	7	13	2	4	3	9	35
07:30 AM	0	0	3	3	0	7	0	7	7	0	4	11	2	3	2	7	28
07:45 AM	1	1	4	6	3	6	0	9	8	1	3	12	1	1	7	9	36
Total	1	1	15	17	5	26	0	31	28	3	15	46	5	9	19	33	127
08:00 AM	0	1	2	3	0	9	0	9	4	1	3	8	0	0	3	3	23
08:15 AM	1	1	2	4	3	6	0	9	3	4	6	13	0	4	1	5	31
08:30 AM	0	1	4	5	2	9	0	11	2	0	4	6	0	4	3	7	29
08:45 AM	0	0	1	1	3	4	2	9	10	0	4	14	0	4	3	7	31
Total	1	3	9	13	8	28	2	38	19	5	17	41	0	12	10	22	114
Grand Total	2	4	24	30	13	54	2	69	47	8	32	87	5	21	29	55	241
Apprch %	6.7	13.3	80		18.8	78.3	2.9		54	9.2	36.8		9.1	38.2	52.7		
Total %	0.8	1.7	10	12.4	5.4	22.4	0.8	28.6	19.5	3.3	13.3	36.1	2.1	8.7	12	22.8	

	Mesa Linda Street Southbound				Eucalyptus Street Westbound				Mesa Linda Street Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	4	4	0	6	0	6	7	2	1	10	0	1	7	8	28
07:15 AM	0	0	4	4	2	7	0	9	6	0	7	13	2	4	3	9	35
07:30 AM	0	0	3	3	0	7	0	7	7	0	4	11	2	3	2	7	28
07:45 AM	1	1	4	6	3	6	0	9	8	1	3	12	1	1	7	9	36
Total Volume	1	1	15	17	5	26	0	31	28	3	15	46	5	9	19	33	127
% App. Total	5.9	5.9	88.2		16.1	83.9	0		60.9	6.5	32.6		15.2	27.3	57.6		
PHF	.250	.250	.938	.708	.417	.929	.000	.861	.875	.375	.536	.885	.625	.563	.679	.917	.882

City of Victorville
N/S: Mesa Linda Street
E/W: Eucalyptus Street
Weather: Clear

File Name : 01_VIC_Mesa Linda_Eucalyptus AM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 2



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

	07:45 AM				07:45 AM				07:00 AM				07:00 AM			
+0 mins.	1	1	4	6	3	6	0	9	7	2	1	10	0	1	7	8
+15 mins.	0	1	2	3	0	9	0	9	6	0	7	13	2	4	3	9
+30 mins.	1	1	2	4	3	6	0	9	7	0	4	11	2	3	2	7
+45 mins.	0	1	4	5	2	9	0	11	8	1	3	12	1	1	7	9
Total Volume	2	4	12	18	8	30	0	38	28	3	15	46	5	9	19	33
% App. Total	11.1	22.2	66.7		21.1	78.9	0		60.9	6.5	32.6		15.2	27.3	57.6	
PHF	.500	1.000	.750	.750	.667	.833	.000	.864	.875	.375	.536	.885	.625	.563	.679	.917

City of Victorville
N/S: Mesa Linda Street
E/W: Eucalyptus Street
Weather: Clear

File Name : 01_VIC_Mesa Linda_Eucalyptus PM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 1

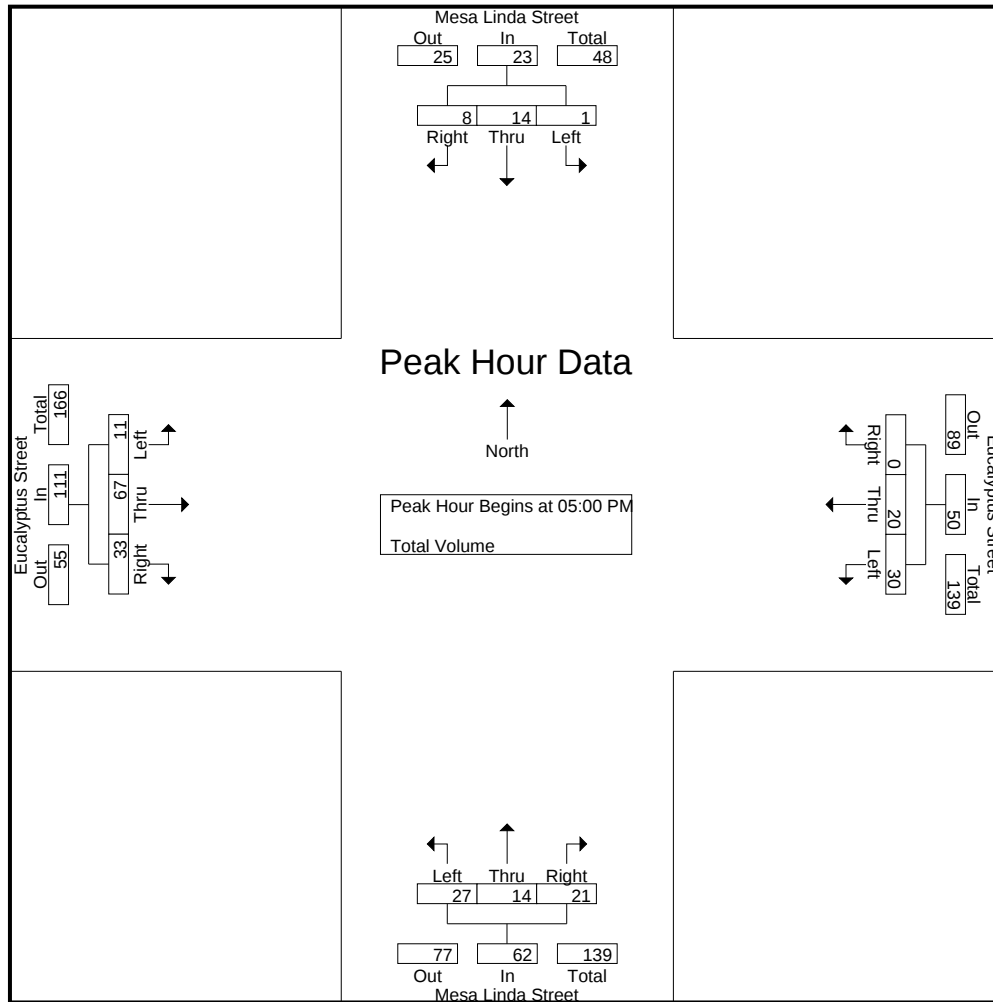
Groups Printed- Total Volume

	Mesa Linda Street Southbound				Eucalyptus Street Westbound				Mesa Linda Street Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	5	2	7	11	8	1	20	8	0	5	13	1	19	11	31	71
04:15 PM	0	4	1	5	6	3	0	9	4	3	7	14	4	12	13	29	57
04:30 PM	1	5	5	11	7	10	1	18	7	2	5	14	1	10	7	18	61
04:45 PM	0	3	2	5	6	2	1	9	1	4	10	15	3	15	5	23	52
Total	1	17	10	28	30	23	3	56	20	9	27	56	9	56	36	101	241
05:00 PM	0	5	1	6	7	9	0	16	6	2	3	11	3	15	8	26	59
05:15 PM	0	2	5	7	11	5	0	16	10	4	8	22	1	11	7	19	64
05:30 PM	1	1	1	3	8	4	0	12	8	4	4	16	2	18	10	30	61
05:45 PM	0	6	1	7	4	2	0	6	3	4	6	13	5	23	8	36	62
Total	1	14	8	23	30	20	0	50	27	14	21	62	11	67	33	111	246
Grand Total	2	31	18	51	60	43	3	106	47	23	48	118	20	123	69	212	487
Apprch %	3.9	60.8	35.3		56.6	40.6	2.8		39.8	19.5	40.7		9.4	58	32.5		
Total %	0.4	6.4	3.7	10.5	12.3	8.8	0.6	21.8	9.7	4.7	9.9	24.2	4.1	25.3	14.2	43.5	

	Mesa Linda Street Southbound				Eucalyptus Street Westbound				Mesa Linda Street Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	5	1	6	7	9	0	16	6	2	3	11	3	15	8	26	59
05:15 PM	0	2	5	7	11	5	0	16	10	4	8	22	1	11	7	19	64
05:30 PM	1	1	1	3	8	4	0	12	8	4	4	16	2	18	10	30	61
05:45 PM	0	6	1	7	4	2	0	6	3	4	6	13	5	23	8	36	62
Total Volume	1	14	8	23	30	20	0	50	27	14	21	62	11	67	33	111	246
% App. Total	4.3	60.9	34.8		60	40	0		43.5	22.6	33.9		9.9	60.4	29.7		
PHF	.250	.583	.400	.821	.682	.556	.000	.781	.675	.875	.656	.705	.550	.728	.825	.771	.961

City of Victorville
N/S: Mesa Linda Street
E/W: Eucalyptus Street
Weather: Clear

File Name : 01_VIC_Mesa Linda_Eucalyptus PM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 2



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

	04:30 PM				04:30 PM				04:45 PM				05:00 PM			
+0 mins.	1	5	5	11	7	10	1	18	1	4	10	15	3	15	8	26
+15 mins.	0	3	2	5	6	2	1	9	6	2	3	11	1	11	7	19
+30 mins.	0	5	1	6	7	9	0	16	10	4	8	22	2	18	10	30
+45 mins.	0	2	5	7	11	5	0	16	8	4	4	16	5	23	8	36
Total Volume	1	15	13	29	31	26	2	59	25	14	25	64	11	67	33	111
% App. Total	3.4	51.7	44.8		52.5	44.1	3.4		39.1	21.9	39.1		9.9	60.4	29.7	
PHF	.250	.750	.650	.659	.705	.650	.500	.819	.625	.875	.625	.727	.550	.728	.825	.771

City of Victorville
N/S: Topaz Road
E/W: Sycamore Street
Weather: Clear

File Name : 02_VIC_Topaz_Sycamore AM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 1

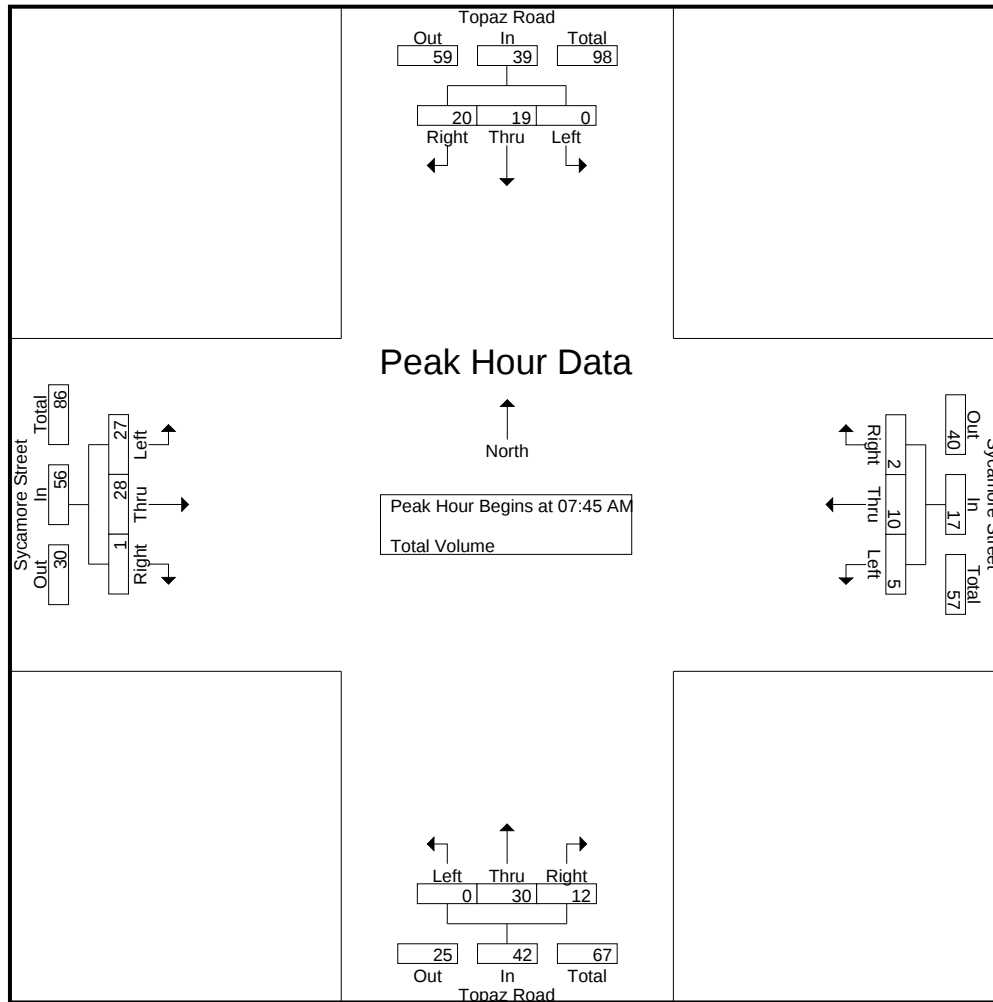
Groups Printed- Total Volume

	Topaz Road Southbound				Sycamore Street Westbound				Topaz Road Northbound				Sycamore Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	2	6	3	2	1	6	0	5	2	7	1	6	0	7	26
07:15 AM	0	3	4	7	4	1	2	7	0	11	5	16	2	6	0	8	38
07:30 AM	0	2	3	5	1	3	0	4	0	11	1	12	4	6	0	10	31
07:45 AM	0	5	6	11	1	5	0	6	0	10	3	13	6	9	0	15	45
Total	0	14	15	29	9	11	3	23	0	37	11	48	13	27	0	40	140
08:00 AM	0	7	3	10	0	1	1	2	0	6	2	8	7	3	0	10	30
08:15 AM	0	2	8	10	2	2	0	4	0	8	6	14	6	8	1	15	43
08:30 AM	0	5	3	8	2	2	1	5	0	6	1	7	8	8	0	16	36
08:45 AM	0	9	2	11	0	4	0	4	0	12	2	14	5	9	0	14	43
Total	0	23	16	39	4	9	2	15	0	32	11	43	26	28	1	55	152
Grand Total	0	37	31	68	13	20	5	38	0	69	22	91	39	55	1	95	292
Apprch %	0	54.4	45.6		34.2	52.6	13.2		0	75.8	24.2		41.1	57.9	1.1		
Total %	0	12.7	10.6	23.3	4.5	6.8	1.7	13	0	23.6	7.5	31.2	13.4	18.8	0.3	32.5	

	Topaz Road Southbound				Sycamore Street Westbound				Topaz Road Northbound				Sycamore Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	5	6	11	1	5	0	6	0	10	3	13	6	9	0	15	45
08:00 AM	0	7	3	10	0	1	1	2	0	6	2	8	7	3	0	10	30
08:15 AM	0	2	8	10	2	2	0	4	0	8	6	14	6	8	1	15	43
08:30 AM	0	5	3	8	2	2	1	5	0	6	1	7	8	8	0	16	36
Total Volume	0	19	20	39	5	10	2	17	0	30	12	42	27	28	1	56	154
% App. Total	0	48.7	51.3		29.4	58.8	11.8		0	71.4	28.6		48.2	50	1.8		
PHF	.000	.679	.625	.886	.625	.500	.500	.708	.000	.750	.500	.750	.844	.778	.250	.875	.856

City of Victorville
N/S: Topaz Road
E/W: Sycamore Street
Weather: Clear

File Name : 02_VIC_Topaz_Sycamore AM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 2



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

	07:45 AM				07:00 AM				07:15 AM				07:45 AM			
+0 mins.	0	5	6	11	3	2	1	6	0	11	5	16	6	9	0	15
+15 mins.	0	7	3	10	4	1	2	7	0	11	1	12	7	3	0	10
+30 mins.	0	2	8	10	1	3	0	4	0	10	3	13	6	8	1	15
+45 mins.	0	5	3	8	1	5	0	6	0	6	2	8	8	8	0	16
Total Volume	0	19	20	39	9	11	3	23	0	38	11	49	27	28	1	56
% App. Total	0	48.7	51.3		39.1	47.8	13		0	77.6	22.4		48.2	50	1.8	
PHF	.000	.679	.625	.886	.563	.550	.375	.821	.000	.864	.550	.766	.844	.778	.250	.875

City of Victorville
N/S: Topaz Road
E/W: Sycamore Street
Weather: Clear

File Name : 02_VIC_Topaz_Sycamore PM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 1

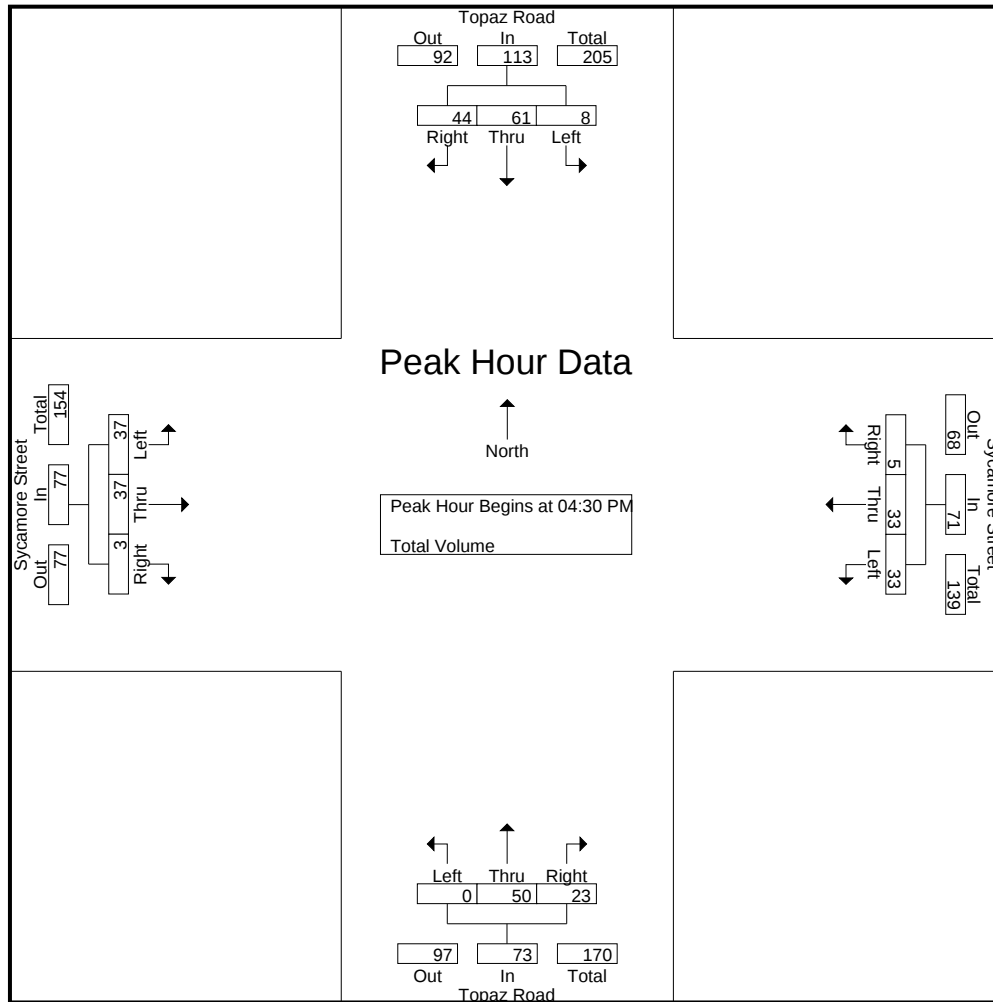
Groups Printed- Total Volume

	Topaz Road Southbound				Sycamore Street Westbound				Topaz Road Northbound				Sycamore Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	18	10	28	11	9	0	20	1	14	5	20	4	9	0	13	81
04:15 PM	1	12	9	22	5	8	2	15	0	11	5	16	3	16	0	19	72
04:30 PM	3	16	10	29	6	9	1	16	0	14	4	18	16	9	2	27	90
04:45 PM	0	13	6	19	10	8	2	20	0	17	6	23	6	11	0	17	79
Total	4	59	35	98	32	34	5	71	1	56	20	77	29	45	2	76	322
05:00 PM	2	14	7	23	7	9	0	16	0	10	7	17	5	7	1	13	69
05:15 PM	3	18	21	42	10	7	2	19	0	9	6	15	10	10	0	20	96
05:30 PM	1	24	8	33	6	6	2	14	2	16	9	27	3	7	1	11	85
05:45 PM	1	23	9	33	5	13	2	20	0	9	5	14	5	5	0	10	77
Total	7	79	45	131	28	35	6	69	2	44	27	73	23	29	2	54	327
Grand Total	11	138	80	229	60	69	11	140	3	100	47	150	52	74	4	130	649
Apprch %	4.8	60.3	34.9		42.9	49.3	7.9		2	66.7	31.3		40	56.9	3.1		
Total %	1.7	21.3	12.3	35.3	9.2	10.6	1.7	21.6	0.5	15.4	7.2	23.1	8	11.4	0.6	20	

	Topaz Road Southbound				Sycamore Street Westbound				Topaz Road Northbound				Sycamore Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	16	10	29	6	9	1	16	0	14	4	18	16	9	2	27	90
04:45 PM	0	13	6	19	10	8	2	20	0	17	6	23	6	11	0	17	79
05:00 PM	2	14	7	23	7	9	0	16	0	10	7	17	5	7	1	13	69
05:15 PM	3	18	21	42	10	7	2	19	0	9	6	15	10	10	0	20	96
Total Volume	8	61	44	113	33	33	5	71	0	50	23	73	37	37	3	77	334
% App. Total	7.1	54	38.9		46.5	46.5	7		0	68.5	31.5		48.1	48.1	3.9		
PHF	.667	.847	.524	.673	.825	.917	.625	.888	.000	.735	.821	.793	.578	.841	.375	.713	.870

City of Victorville
N/S: Topaz Road
E/W: Sycamore Street
Weather: Clear

File Name : 02_VIC_Topaz_Sycamore PM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 2



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

	05:00 PM				04:00 PM				04:45 PM				04:30 PM			
+0 mins.	2	14	7	23	11	9	0	20	0	17	6	23	16	9	2	27
+15 mins.	3	18	21	42	5	8	2	15	0	10	7	17	6	11	0	17
+30 mins.	1	24	8	33	6	9	1	16	0	9	6	15	5	7	1	13
+45 mins.	1	23	9	33	10	8	2	20	2	16	9	27	10	10	0	20
Total Volume	7	79	45	131	32	34	5	71	2	52	28	82	37	37	3	77
% App. Total	5.3	60.3	34.4		45.1	47.9	7		2.4	63.4	34.1		48.1	48.1	3.9	
PHF	.583	.823	.536	.780	.727	.944	.625	.888	.250	.765	.778	.759	.578	.841	.375	.713

City of Victorville
N/S: Topaz Road
E/W: Eucalyptus Street
Weather: Clear

File Name : 03_VIC_Topaz_Eucalyptus AM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 1

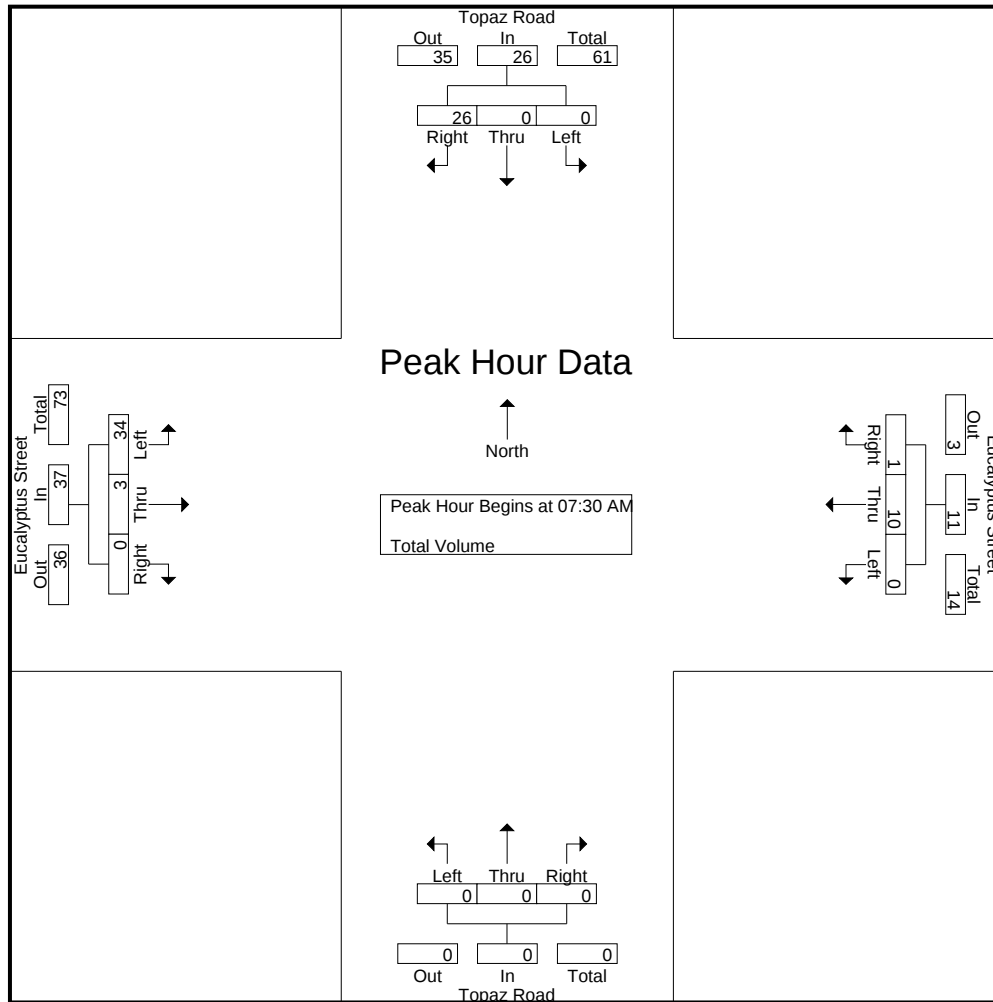
Groups Printed- Total Volume

	Topaz Road Southbound				Eucalyptus Street Westbound				Topaz Road Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	4	5	0	2	0	2	0	0	0	0	1	2	0	3	10
07:15 AM	0	0	4	4	0	3	0	3	0	0	0	0	11	0	0	11	18
07:30 AM	0	0	6	6	0	3	0	3	0	0	0	0	9	1	0	10	19
07:45 AM	0	0	10	10	0	1	0	1	0	0	0	0	7	1	0	8	19
Total	1	0	24	25	0	9	0	9	0	0	0	0	28	4	0	32	66
08:00 AM	0	0	2	2	0	2	0	2	0	0	0	0	7	0	0	7	11
08:15 AM	0	0	8	8	0	4	1	5	0	0	0	0	11	1	0	12	25
08:30 AM	0	0	4	4	0	4	0	4	0	0	0	0	6	3	0	9	17
08:45 AM	0	0	7	7	0	2	1	3	0	0	0	0	8	2	0	10	20
Total	0	0	21	21	0	12	2	14	0	0	0	0	32	6	0	38	73
Grand Total	1	0	45	46	0	21	2	23	0	0	0	0	60	10	0	70	139
Apprch %	2.2	0	97.8		0	91.3	8.7		0	0	0		85.7	14.3	0		
Total %	0.7	0	32.4	33.1	0	15.1	1.4	16.5	0	0	0	0	43.2	7.2	0	50.4	

	Topaz Road Southbound				Eucalyptus Street Westbound				Topaz Road Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	6	6	0	3	0	3	0	0	0	0	9	1	0	10	19
07:45 AM	0	0	10	10	0	1	0	1	0	0	0	0	7	1	0	8	19
08:00 AM	0	0	2	2	0	2	0	2	0	0	0	0	7	0	0	7	11
08:15 AM	0	0	8	8	0	4	1	5	0	0	0	0	11	1	0	12	25
Total Volume	0	0	26	26	0	10	1	11	0	0	0	0	34	3	0	37	74
% App. Total	0	0	100		0	90.9	9.1		0	0	0		91.9	8.1	0		
PHF	.000	.000	.650	.650	.000	.625	.250	.550	.000	.000	.000	.000	.773	.750	.000	.771	.740

City of Victorville
N/S: Topaz Road
E/W: Eucalyptus Street
Weather: Clear

File Name : 03_VIC_Topaz_Eucalyptus AM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 2



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

	07:30 AM				08:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	6	6	0	2	0	2	0	0	0	0	7	0	0	7
+15 mins.	0	0	10	10	0	4	1	5	0	0	0	0	11	1	0	12
+30 mins.	0	0	2	2	0	4	0	4	0	0	0	0	6	3	0	9
+45 mins.	0	0	8	8	0	2	1	3	0	0	0	0	8	2	0	10
Total Volume	0	0	26	26	0	12	2	14	0	0	0	0	32	6	0	38
% App. Total	0	0	100		0	85.7	14.3		0	0	0		84.2	15.8	0	
PHF	.000	.000	.650	.650	.000	.750	.500	.700	.000	.000	.000	.000	.727	.500	.000	.792

City of Victorville
N/S: Topaz Road
E/W: Eucalyptus Street
Weather: Clear

File Name : 03_VIC_Topaz_Eucalyptus PM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 1

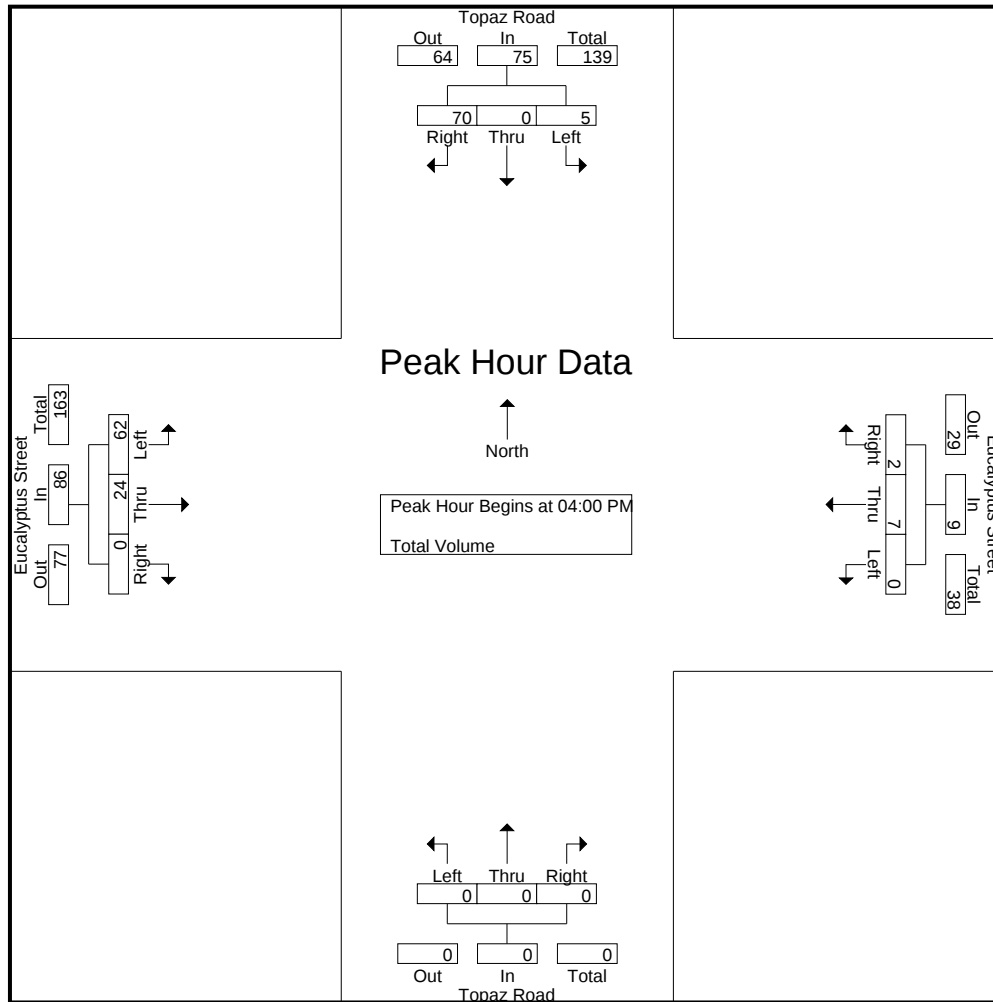
Groups Printed- Total Volume

	Topaz Road Southbound				Eucalyptus Street Westbound				Topaz Road Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	23	24	0	2	0	2	0	0	0	0	15	7	0	22	48
04:15 PM	0	0	11	11	0	2	1	3	0	0	0	0	14	4	0	18	32
04:30 PM	3	0	20	23	0	3	0	3	0	0	0	0	13	6	0	19	45
04:45 PM	1	0	16	17	0	0	1	1	0	0	0	0	20	7	0	27	45
Total	5	0	70	75	0	7	2	9	0	0	0	0	62	24	0	86	170
05:00 PM	0	0	17	17	0	1	0	1	0	0	0	0	12	7	0	19	37
05:15 PM	0	0	15	15	0	3	0	3	0	0	0	0	13	3	0	16	34
05:30 PM	0	0	24	24	0	3	1	4	0	0	0	0	15	4	0	19	47
05:45 PM	0	0	20	20	0	0	0	0	0	0	0	0	13	4	0	17	37
Total	0	0	76	76	0	7	1	8	0	0	0	0	53	18	0	71	155
Grand Total	5	0	146	151	0	14	3	17	0	0	0	0	115	42	0	157	325
Apprch %	3.3	0	96.7		0	82.4	17.6		0	0	0		73.2	26.8	0		
Total %	1.5	0	44.9	46.5	0	4.3	0.9	5.2	0	0	0	0	35.4	12.9	0	48.3	

	Topaz Road Southbound				Eucalyptus Street Westbound				Topaz Road Northbound				Eucalyptus Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	0	23	24	0	2	0	2	0	0	0	0	15	7	0	22	48
04:15 PM	0	0	11	11	0	2	1	3	0	0	0	0	14	4	0	18	32
04:30 PM	3	0	20	23	0	3	0	3	0	0	0	0	13	6	0	19	45
04:45 PM	1	0	16	17	0	0	1	1	0	0	0	0	20	7	0	27	45
Total Volume	5	0	70	75	0	7	2	9	0	0	0	0	62	24	0	86	170
% App. Total	6.7	0	93.3		0	77.8	22.2		0	0	0		72.1	27.9	0		
PHF	.417	.000	.761	.781	.000	.583	.500	.750	.000	.000	.000	.000	.775	.857	.000	.796	.885

City of Victorville
N/S: Topaz Road
E/W: Eucalyptus Street
Weather: Clear

File Name : 03_VIC_Topaz_Eucalyptus PM
Site Code : 99920469
Start Date : 12/15/2020
Page No : 2



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

	05:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	17	17	0	2	0	2	0	0	0	0	15	7	0	22
+15 mins.	0	0	15	15	0	2	1	3	0	0	0	0	14	4	0	18
+30 mins.	0	0	24	24	0	3	0	3	0	0	0	0	13	6	0	19
+45 mins.	0	0	20	20	0	0	1	1	0	0	0	0	20	7	0	27
Total Volume	0	0	76	76	0	7	2	9	0	0	0	0	62	24	0	86
% App. Total	0	0	100		0	77.8	22.2		0	0	0		72.1	27.9	0	
PHF	.000	.000	.792	.792	.000	.583	.500	.750	.000	.000	.000	.000	.775	.857	.000	.796

Counts Unlimited, Inc.

City of Victorville
Eucalyptus Avenue
E/ Highway 395
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

VIC055
Site Code: 189-18720

Start Time	18-Oct-18 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	23			2	27				
12:15		5	23			0	15				
12:30		3	11			1	26				
12:45		2	23	13	80	6	14	9	82	22	162
01:00		1	22			3	21				
01:15		4	19			3	16				
01:30		2	22			1	13				
01:45		2	24	9	87	3	25	10	75	19	162
02:00		6	9			0	24				
02:15		3	25			2	15				
02:30		1	17			3	26				
02:45		2	17	12	68	5	17	10	82	22	150
03:00		2	8			5	16				
03:15		3	13			9	13				
03:30		4	25			7	8				
03:45		0	20	9	66	14	9	35	46	44	112
04:00		2	17			10	14				
04:15		1	27			11	16				
04:30		1	30			17	19				
04:45		0	25	4	99	13	18	51	67	55	166
05:00		2	33			13	21				
05:15		0	38			13	16				
05:30		2	21			10	13				
05:45		5	34	9	126	24	14	60	64	69	190
06:00		22	44			39	19				
06:15		8	23			20	16				
06:30		15	27			19	14				
06:45		16	14	61	108	32	16	110	65	171	173
07:00		14	26			34	10				
07:15		22	29			24	5				
07:30		7	15			30	4				
07:45		9	21	52	91	27	30	115	49	167	140
08:00		20	22			15	28				
08:15		10	15			6	11				
08:30		8	16			19	6				
08:45		10	17	48	70	13	4	53	49	101	119
09:00		9	17			15	2				
09:15		9	16			12	3				
09:30		8	12			17	9				
09:45		5	8	31	53	11	4	55	18	86	71
10:00		8	6			18	4				
10:15		11	8			14	0				
10:30		4	3			16	2				
10:45		18	14	41	31	8	4	56	10	97	41
11:00		3	8			16	0				
11:15		13	10			11	0				
11:30		11	2			12	5				
11:45		13	12	40	32	20	0	59	5	99	37
Total		329	911	329	911	623	612	623	612	952	1523
Combined Total		1240		1240		1235		1235		2475	
AM Peak	-	06:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	67	-	-	-	120	-	-	-	-	-
P.H.F.		0.761				0.882					
PM Peak	-	-	05:15	-	-	-	01:45	-	-	-	-
Vol.	-	-	137	-	-	-	90	-	-	-	-
P.H.F.			0.778				0.865				
Percentage		26.5%	73.5%			50.4%	49.6%				
ADT/AADT		ADT 2,475	AADT 2,475								

Counts Unlimited, Inc.

City of Victorville
Eucalyptus Avenue
W/ Topaz Road
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

VIC056
Site Code: 189-18720

Start Time	18-Oct-18 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	18			0	20				
12:15		2	15			0	20				
12:30		0	12			0	13				
12:45		3	17	5	62	0	15	0	68	5	130
01:00		0	22			0	20				
01:15		1	19			1	10				
01:30		5	15			0	16				
01:45		2	16	8	72	2	14	3	60	11	132
02:00		1	21			2	12				
02:15		0	21			1	26				
02:30		2	13			3	13				
02:45		0	19	3	74	4	14	10	65	13	139
03:00		2	16			4	12				
03:15		0	30			4	17				
03:30		1	23			3	13				
03:45		2	9	5	78	5	16	16	58	21	136
04:00		2	26			5	38				
04:15		1	21			2	12				
04:30		2	19			4	22				
04:45		1	23	6	89	6	16	17	88	23	177
05:00		5	18			5	33				
05:15		5	28			9	25				
05:30		21	28			10	26				
05:45		10	23	41	97	8	22	32	106	73	203
06:00		15	19			9	20				
06:15		13	12			20	21				
06:30		21	26			9	14				
06:45		17	20	66	77	14	11	52	66	118	143
07:00		25	13			17	14				
07:15		15	21			16	20				
07:30		19	29			4	15				
07:45		10	12	69	75	8	14	45	63	114	138
08:00		12	10			9	7				
08:15		10	9			11	4				
08:30		12	13			11	10				
08:45		11	7	45	39	17	10	48	31	93	70
09:00		9	8			11	6				
09:15		9	8			12	9				
09:30		14	2			11	1				
09:45		18	3	50	21	12	5	46	21	96	42
10:00		10	4			15	3				
10:15		12	4			6	3				
10:30		16	5			12	1				
10:45		3	4	41	17	7	3	40	10	81	27
11:00		8	0			14	1				
11:15		16	4			24	1				
11:30		22	0			16	2				
11:45		19	0	65	4	15	0	69	4	134	8
Total		404	705	404	705	378	640	378	640	782	1345
Combined Total		1109		1109		1018		1018		2127	
AM Peak	-	06:30	-	-	-	11:00	-	-	-	-	-
Vol.	-	78	-	-	-	69	-	-	-	-	-
P.H.F.		0.780				0.719					
PM Peak	-	-	05:15	-	-	-	05:00	-	-	-	-
Vol.	-	-	98	-	-	-	106	-	-	-	-
P.H.F.			0.875				0.803				
Percentage		36.4%	63.6%			37.1%	62.9%				
ADT/AADT		ADT 2,127		AADT 2,127							

APPENDIX B: VOLUME DEVELOPMENT WORKSHEETS

Table B-1: Existing Adjusted Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth
1 . Mesa Linda Street/Eucalyptus Street								
NBL	28	70.27%	20	48	27	29.52%	8	35
NBT	3	70.27%	2	5	14	29.52%	4	18
NBR	15	70.27%	11	26	21	29.52%	6	27
SBL	1	70.27%	1	2	1	29.52%	0	1
SBT	1	70.27%	1	2	14	29.52%	4	18
SBR	15	70.27%	11	26	8	29.52%	2	10
EBL	5	70.27%	4	9	11	29.52%	3	14
EBT	9	70.27%	6	15	67	29.52%	20	87
EBR	19	70.27%	13	32	33	29.52%	10	43
WBL	5	70.27%	4	9	30	29.52%	9	39
WBT	26	70.27%	18	44	20	29.52%	6	26
WBR	0	70.27%	0	0	0	29.52%	0	0
North Leg								
Approach	17	210.82%	13	30	23	88.56%	6	29
Departure	8	210.82%	6	14	25	88.56%	7	32
Total	25	421.65%	19	44	48	177.13%	13	61
South Leg								
Approach	46	210.82%	33	79	62	88.56%	18	80
Departure	25	210.82%	18	43	77	88.56%	23	100
Total	71	421.65%	51	122	139	177.13%	41	180
East Leg								
Approach	31	210.82%	22	53	50	88.56%	15	65
Departure	25	210.82%	18	43	89	88.56%	26	115
Total	56	421.65%	40	96	139	177.13%	41	180
West Leg								
Approach	33	210.82%	23	56	111	88.56%	33	144
Departure	69	210.82%	49	118	55	88.56%	16	71
Total	102	421.65%	72	174	166	177.13%	49	215
Total Approaches								
Approach	127	843.29%	91	218	246	354.26%	72	318
Departure	127	843.29%	91	218	246	354.26%	72	318
Total	254	1686.59%	182	436	492	708.52%	144	636

Table B-1: Existing Adjusted Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth
2 . Topaz Road/Sycamore Street								
NBL	0	70.27%	0	0	0	29.52%	0	0
NBT	30	70.27%	21	51	50	29.52%	15	65
NBR	12	70.27%	8	20	23	29.52%	7	30
SBL	0	70.27%	0	0	8	29.52%	2	10
SBT	19	70.27%	13	32	61	29.52%	18	79
SBR	20	70.27%	14	34	44	29.52%	13	57
EBL	27	70.27%	19	46	37	29.52%	11	48
EBT	28	70.27%	20	48	37	29.52%	11	48
EBR	1	70.27%	1	2	3	29.52%	1	4
WBL	5	70.27%	4	9	33	29.52%	10	43
WBT	10	70.27%	7	17	33	29.52%	10	43
WBR	2	70.27%	1	3	5	29.52%	1	6
North Leg								
Approach	39	210.82%	27	66	113	88.56%	33	146
Departure	59	210.82%	41	100	92	88.56%	27	119
Total	98	421.65%	68	166	205	177.13%	60	265
South Leg								
Approach	42	210.82%	29	71	73	88.56%	22	95
Departure	25	210.82%	18	43	97	88.56%	29	126
Total	67	421.65%	47	114	170	177.13%	51	221
East Leg								
Approach	17	210.82%	12	29	71	88.56%	21	92
Departure	40	210.82%	28	68	68	88.56%	20	88
Total	57	421.65%	40	97	139	177.13%	41	180
West Leg								
Approach	56	210.82%	40	96	77	88.56%	23	100
Departure	30	210.82%	21	51	77	88.56%	23	100
Total	86	421.65%	61	147	154	177.13%	46	200
Total Approaches								
Approach	154	843.29%	108	262	334	354.26%	99	433
Departure	154	843.29%	108	262	334	354.26%	99	433
Total	308	1686.59%	216	524	668	708.52%	198	866

Table B-1: Existing Adjusted Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth
3 . Topaz Road/Eucalyptus Street								
NBL	0	70.27%	0	0	0	29.52%	0	0
NBT	0	70.27%	0	0	0	29.52%	0	0
NBR	0	70.27%	0	0	0	29.52%	0	0
SBL	0	70.27%	0	0	5	29.52%	1	6
SBT	0	70.27%	0	0	0	29.52%	0	0
SBR	26	70.27%	18	44	70	29.52%	21	91
EBL	34	70.27%	24	58	62	29.52%	18	80
EBT	3	70.27%	2	5	24	29.52%	7	31
EBR	0	70.27%	0	0	0	29.52%	0	0
WBL	0	70.27%	0	0	0	29.52%	0	0
WBT	10	70.27%	7	17	7	29.52%	2	9
WBR	1	70.27%	1	2	2	29.52%	1	3
North Leg								
Approach	26	210.82%	18	44	75	88.56%	22	97
Departure	35	210.82%	25	60	64	88.56%	19	83
Total	61	421.65%	43	104	139	177.13%	41	180
South Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
East Leg								
Approach	11	210.82%	8	19	9	88.56%	3	12
Departure	3	210.82%	2	5	29	88.56%	8	37
Total	14	421.65%	10	24	38	177.13%	11	49
West Leg								
Approach	37	210.82%	26	63	86	88.56%	25	111
Departure	36	210.82%	25	61	77	88.56%	23	100
Total	73	421.65%	51	124	163	177.13%	48	211
Total Approaches								
Approach	74	843.29%	52	126	170	354.26%	50	220
Departure	74	843.29%	52	126	170	354.26%	50	220
Total	148	1686.59%	104	252	340	708.52%	100	440

Table B-1: Existing Adjusted Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth
4 . Topaz Road/Street A								
NBL	0	70.27%	0	0	0	29.52%	0	0
NBT	0	70.27%	0	0	0	29.52%	0	0
NBR	0	70.27%	0	0	0	29.52%	0	0
SBL	0	70.27%	0	0	0	29.52%	0	0
SBT	0	70.27%	0	0	0	29.52%	0	0
SBR	0	70.27%	0	0	0	29.52%	0	0
EBL	0	70.27%	0	0	0	29.52%	0	0
EBT	0	70.27%	0	0	0	29.52%	0	0
EBR	0	70.27%	0	0	0	29.52%	0	0
WBL	0	70.27%	0	0	0	29.52%	0	0
WBT	0	70.27%	0	0	0	29.52%	0	0
WBR	0	70.27%	0	0	0	29.52%	0	0
North Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
South Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
East Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
West Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
Total Approaches								
Approach	0	843.29%	0	0	0	354.26%	0	0
Departure	0	843.29%	0	0	0	354.26%	0	0
Total	0	1686.59%	0	0	0	708.52%	0	0

Table B-1: Existing Adjusted Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth	Exist PCE Volume	% Growth	Total Growth	Exist W. Growth
5 . Street B/Eucalyptus Street								
NBL	0	70.27%	0	0	0	29.52%	0	0
NBT	0	70.27%	0	0	0	29.52%	0	0
NBR	0	70.27%	0	0	0	29.52%	0	0
SBL	0	70.27%	0	0	0	29.52%	0	0
SBT	0	70.27%	0	0	0	29.52%	0	0
SBR	0	70.27%	0	0	0	29.52%	0	0
EBL	0	70.27%	0	0	0	29.52%	0	0
EBT	3	70.27%	2	5	29	29.52%	9	38
EBR	0	70.27%	0	0	0	29.52%	0	0
WBL	0	70.27%	0	0	0	29.52%	0	0
WBT	11	70.27%	8	19	9	29.52%	3	12
WBR	0	70.27%	0	0	0	29.52%	0	0
North Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
South Leg								
Approach	0	210.82%	0	0	0	88.56%	0	0
Departure	0	210.82%	0	0	0	88.56%	0	0
Total	0	421.65%	0	0	0	177.13%	0	0
East Leg								
Approach	11	210.82%	8	19	9	88.56%	3	12
Departure	3	210.82%	2	5	29	88.56%	9	38
Total	14	421.65%	10	24	38	177.13%	12	50
West Leg								
Approach	3	210.82%	2	5	29	88.56%	9	38
Departure	11	210.82%	8	19	9	88.56%	3	12
Total	14	421.65%	10	24	38	177.13%	12	50
Total Approaches								
Approach	14	843.29%	10	24	38	354.26%	12	50
Departure	14	843.29%	10	24	38	354.26%	12	50
Total	28	1686.59%	20	48	76	708.52%	24	100

Table B-2: Existing With Project Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Exist PCE Volume	Project Trips	Exist WP	Exist PCE Volume	Project Trips	Exist WP
1 . Mesa Linda Street/Eucalyptus Street						
NBL	48	0	48	35	0	35
NBT	5	0	5	18	0	18
NBR	26	0	26	27	0	27
SBL	2	0	2	1	0	1
SBT	2	0	2	18	0	18
SBR	26	0	26	10	0	10
EBL	9	0	9	14	0	14
EBT	15	7	22	87	21	108
EBR	32	0	32	43	0	43
WBL	9	0	9	39	0	39
WBT	44	19	63	26	13	39
WBR	0	0	0	0	0	0
North Leg						
Approach	30	0	30	29	0	29
Departure	14	0	14	32	0	32
Total	44	0	44	61	0	61
South Leg						
Approach	79	0	79	80	0	80
Departure	43	0	43	100	0	100
Total	122	0	122	180	0	180
East Leg						
Approach	53	19	72	65	13	78
Departure	43	7	50	115	21	136
Total	96	26	122	180	34	214
West Leg						
Approach	56	7	63	144	21	165
Departure	118	19	137	71	13	84
Total	174	26	200	215	34	249
Total Approaches						
Approach	218	26	244	318	34	352
Departure	218	26	244	318	34	352
Total	436	52	488	636	68	704

Table B-2: Existing With Project Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Exist PCE Volume	Project Trips	Exist WP	Exist PCE Volume	Project Trips	Exist WP
2 . Topaz Road/Sycamore Street						
NBL	0	0	0	0	0	0
NBT	51	19	70	65	13	78
NBR	20	0	20	30	0	30
SBL	0	0	0	10	0	10
SBT	32	7	39	79	21	100
SBR	34	0	34	57	0	57
EBL	46	0	46	48	0	48
EBT	48	0	48	48	0	48
EBR	2	0	2	4	0	4
WBL	9	0	9	43	0	43
WBT	17	0	17	43	0	43
WBR	3	0	3	6	0	6
North Leg						
Approach	66	7	73	146	21	167
Departure	100	19	119	119	13	132
Total	166	26	192	265	34	299
South Leg						
Approach	71	19	90	95	13	108
Departure	43	7	50	126	21	147
Total	114	26	140	221	34	255
East Leg						
Approach	29	0	29	92	0	92
Departure	68	0	68	88	0	88
Total	97	0	97	180	0	180
West Leg						
Approach	96	0	96	100	0	100
Departure	51	0	51	100	0	100
Total	147	0	147	200	0	200
Total Approaches						
Approach	262	26	288	433	34	467
Departure	262	26	288	433	34	467
Total	524	52	576	866	68	934

Table B-2: Existing With Project Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Exist PCE Volume	Project Trips	Exist WP	Exist PCE Volume	Project Trips	Exist WP
3 . Topaz Road/Eucalytpus Street						
NBL	0	9	9	0	6	6
NBT	0	9	9	0	6	6
NBR	0	0	0	0	0	0
SBL	0	3	3	6	11	17
SBT	0	3	3	0	11	11
SBR	44	0	44	91	0	91
EBL	58	0	58	80	0	80
EBT	5	3	8	31	11	42
EBR	0	3	3	0	11	11
WBL	0	0	0	0	0	0
WBT	17	9	26	9	6	15
WBR	2	9	11	3	6	9
North Leg						
Approach	44	6	50	97	22	119
Departure	60	18	78	83	12	95
Total	104	24	128	180	34	214
South Leg						
Approach	0	18	18	0	12	12
Departure	0	6	6	0	22	22
Total	0	24	24	0	34	34
East Leg						
Approach	19	18	37	12	12	24
Departure	5	6	11	37	22	59
Total	24	24	48	49	34	83
West Leg						
Approach	63	6	69	111	22	133
Departure	61	18	79	100	12	112
Total	124	24	148	211	34	245
Total Approaches						
Approach	126	48	174	220	68	288
Departure	126	48	174	220	68	288
Total	252	96	348	440	136	576

Table B-2: Existing With Project Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Exist PCE Volume	Project Trips	Exist WP	Exist PCE Volume	Project Trips	Exist WP
4 . Topaz Road/Street A						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	7	7	0	21	21
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	19	19	0	13	13
North Leg						
Approach	0	7	7	0	21	21
Departure	0	19	19	0	13	13
Total	0	26	26	0	34	34
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	0	19	19	0	13	13
Departure	0	7	7	0	21	21
Total	0	26	26	0	34	34
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	0	26	26	0	34	34
Departure	0	26	26	0	34	34
Total	0	52	52	0	68	68

Table B-2: Existing With Project Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Exist PCE Volume	Project Trips	Exist WP	Exist PCE Volume	Project Trips	Exist WP
5 . Street B/Eucalyptus Street						
NBL	0	19	19	0	13	13
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	5	0	5	38	0	38
EBR	0	7	7	0	21	21
WBL	0	0	0	0	0	0
WBT	19	0	19	12	0	12
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	0	19	19	0	13	13
Departure	0	7	7	0	21	21
Total	0	26	26	0	34	34
East Leg						
Approach	19	0	19	12	0	12
Departure	5	0	5	38	0	38
Total	24	0	24	50	0	50
West Leg						
Approach	5	7	12	38	21	59
Departure	19	19	38	12	13	25
Total	24	26	50	50	34	84
Total Approaches						
Approach	24	26	50	50	34	84
Departure	24	26	50	50	34	84
Total	48	52	100	100	68	168

Table B-3 - Opening Year (2022) Without Project Peak Hour Volume Summary

	AM Peak Hour							PM Peak Hour						
	Existing	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP	Existing	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP
	2,020 Total							2,020 Total						
1 - Mesa Linda St/Eucalyptus St														
NBL	48	2	50	43	93	0	93	35	1	36	29	65	0	65
NBT	5	0	5	33	38	0	38	18	1	19	22	41	0	41
NBR	26	1	27	33	60	0	60	27	1	28	22	50	0	50
SBL	2	0	2	0	2	0	2	1	0	1	0	1	0	1
SBT	2	0	2	11	13	0	13	18	1	19	37	56	0	56
SBR	26	1	27	3	30	0	30	10	0	10	10	20	0	20
EBL	9	0	9	9	18	0	18	14	1	15	6	21	0	21
EBT	15	1	16	14	30	7	37	87	3	90	24	114	21	135
EBR	32	1	33	14	47	0	47	43	2	45	48	93	0	93
WBL	9	0	9	11	20	0	20	39	2	41	37	78	0	78
WBT	44	2	46	19	65	19	84	26	1	27	21	48	13	61
WBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Leg														
Approach	30	1	31	14	45	0	45	29	1	30	47	77	0	77
Departure	14	0	14	42	56	0	56	32	2	34	28	62	0	62
Total	44	1	45	56	101	0	101	61	3	64	75	139	0	139
South Leg														
Approach	79	3	82	109	191	0	191	80	3	83	73	156	0	156
Departure	43	1	44	36	80	0	80	100	5	105	122	227	0	227
Total	122	4	126	145	271	0	271	180	8	188	195	383	0	383
East Leg														
Approach	53	2	55	30	85	19	104	65	3	68	58	126	13	139
Departure	43	2	45	47	92	7	99	115	4	119	46	165	21	186
Total	96	4	100	77	177	26	203	180	7	187	104	291	34	325
West Leg														
Approach	56	2	58	37	95	7	102	144	6	150	78	228	21	249
Departure	118	5	123	65	188	19	207	71	2	73	60	133	13	146
Total	174	7	181	102	283	26	309	215	8	223	138	361	34	395
Total Approaches														
Approach	218	8	226	190	416	26	442	318	13	331	256	587	34	621
Departure	218	8	226	190	416	26	442	318	13	331	256	587	34	621
Total	436	16	452	380	832	52	884	636	26	662	512	1,174	68	1,242

Table B-3 - Opening Year (2022) Without Project Peak Hour Volume Summary

		AM Peak Hour						PM Peak Hour							
		Existing 2,020 Total	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP	Existing 2,020 Total	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP
2	. Topaz Rd/Sycamore St														
	NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NBT	51	2	53	55	108	19	127	65	3	68	37	105	13	118
	NBR	20	1	21	0	21	0	21	30	1	31	0	31	0	31
	SBL	0	0	0	0	0	0	0	10	0	10	0	10	0	10
	SBT	32	1	33	18	51	7	58	79	3	82	63	145	21	166
	SBR	34	1	35	14	49	0	49	57	2	59	48	107	0	107
	EBL	46	2	48	42	90	0	90	48	2	50	28	78	0	78
	EBT	48	2	50	0	50	0	50	48	2	50	0	50	0	50
	EBR	2	0	2	0	2	0	2	4	0	4	0	4	0	4
	WBL	9	0	9	0	9	0	9	43	2	45	0	45	0	45
	WBT	17	1	18	0	18	0	18	43	2	45	0	45	0	45
	WBR	3	0	3	0	3	0	3	6	0	6	0	6	0	6
	North Leg														
	Approach	66	2	68	32	100	7	107	146	5	151	111	262	21	283
	Departure	100	4	104	97	201	19	220	119	5	124	65	189	13	202
	Total	166	6	172	129	301	26	327	265	10	275	176	451	34	485
	South Leg														
	Approach	71	3	74	55	129	19	148	95	4	99	37	136	13	149
	Departure	43	1	44	18	62	7	69	126	5	131	63	194	21	215
	Total	114	4	118	73	191	26	217	221	9	230	100	330	34	364
	East Leg														
	Approach	29	1	30	0	30	0	30	92	4	96	0	96	0	96
	Departure	68	3	71	0	71	0	71	88	3	91	0	91	0	91
	Total	97	4	101	0	101	0	101	180	7	187	0	187	0	187
	West Leg														
	Approach	96	4	100	42	142	0	142	100	4	104	28	132	0	132
	Departure	51	2	53	14	67	0	67	100	4	104	48	152	0	152
	Total	147	6	153	56	209	0	209	200	8	208	76	284	0	284
	Total Approaches														
	Approach	262	10	272	129	401	26	427	433	17	450	176	626	34	660
	Departure	262	10	272	129	401	26	427	433	17	450	176	626	34	660
	Total	524	20	544	258	802	52	854	866	34	900	352	1,252	68	1,320

Table B-3 - Opening Year (2022) Without Project Peak Hour Volume Summary

		AM Peak Hour							PM Peak Hour						
		Existing 2,020 Total	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP	Existing 2,020 Total	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP
3	. Topaz Rd/Eucalyptus St														
	NBL	0	0	0	0	0	9	9	0	0	0	0	0	6	6
	NBT	0	0	0	0	0	9	9	0	0	0	0	0	6	6
	NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SBL	0	0	0	0	0	3	3	6	0	6	0	6	11	17
	SBT	0	0	0	0	0	3	3	0	0	0	0	0	11	11
	SBR	44	2	46	18	64	0	64	91	4	95	63	158	0	158
	EBL	58	2	60	55	115	0	115	80	3	83	37	120	0	120
	EBT	5	0	5	0	5	3	8	31	1	32	0	32	11	43
	EBR	0	0	0	0	0	3	3	0	0	0	0	0	11	11
	WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WBT	17	1	18	0	18	9	27	9	0	9	0	9	6	15
	WBR	2	0	2	0	2	9	11	3	0	3	0	3	6	9
	North Leg														
	Approach	44	2	46	18	64	6	70	97	4	101	63	164	22	186
	Departure	60	2	62	55	117	18	135	83	3	86	37	123	12	135
	Total	104	4	108	73	181	24	205	180	7	187	100	287	34	321
	South Leg														
	Approach	0	0	0	0	0	18	18	0	0	0	0	0	12	12
	Departure	0	0	0	0	0	6	6	0	0	0	0	0	22	22
	Total	0	0	0	0	0	24	24	0	0	0	0	0	34	34
	East Leg														
	Approach	19	1	20	0	20	18	38	12	0	12	0	12	12	24
	Departure	5	0	5	0	5	6	11	37	1	38	0	38	22	60
	Total	24	1	25	0	25	24	49	49	1	50	0	50	34	84
	West Leg														
	Approach	63	2	65	55	120	6	126	111	4	115	37	152	22	174
	Departure	61	3	64	18	82	18	100	100	4	104	63	167	12	179
	Total	124	5	129	73	202	24	226	211	8	219	100	319	34	353
	Total Approaches														
	Approach	126	5	131	73	204	48	252	220	8	228	100	328	68	396
	Departure	126	5	131	73	204	48	252	220	8	228	100	328	68	396
	Total	252	10	262	146	408	96	504	440	16	456	200	656	136	792

Table B-3 - Opening Year (2022) Without Project Peak Hour Volume Summary

	AM Peak Hour							PM Peak Hour						
	Existing	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP	Existing	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP
	2,020 Total							2,020 Total						
4 . Topaz Rd/Street A														
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	7	7	0	0	0	0	0	21	21
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	19	19	0	0	0	0	0	13	13
North Leg														
Approach	0	0	0	0	0	7	7	0	0	0	0	0	21	21
Departure	0	0	0	0	0	19	19	0	0	0	0	0	13	13
Total	0	0	0	0	0	26	26	0	0	0	0	0	34	34
South Leg														
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg														
Approach	0	0	0	0	0	19	19	0	0	0	0	0	13	13
Departure	0	0	0	0	0	7	7	0	0	0	0	0	21	21
Total	0	0	0	0	0	26	26	0	0	0	0	0	34	34
West Leg														
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approaches														
Approach	0	0	0	0	0	26	26	0	0	0	0	0	34	34
Departure	0	0	0	0	0	26	26	0	0	0	0	0	34	34
Total	0	0	0	0	0	52	52	0	0	0	0	0	68	68

Table B-3 - Opening Year (2022) Without Project Peak Hour Volume Summary

		AM Peak Hour							PM Peak Hour						
		Existing 2,020 Total	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP	Existing 2,020 Total	Growth	OY Back.	Cumul. Pr.	OY NP	Project Trips	OY WP
5	Street B/Eucalyptus St														
	NBL	0	0	0	0	0	19	19	0	0	0	0	0	13	13
	NBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EBT	5	0	5	0	5	0	5	38	2	40	0	40	0	40
	EBR	0	0	0	0	0	7	7	0	0	0	0	0	21	21
	WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WBT	19	1	20	0	20	0	20	12	0	12	0	12	0	12
	WBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	North Leg														
	Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	South Leg														
	Approach	0	0	0	0	0	19	19	0	0	0	0	0	13	13
	Departure	0	0	0	0	0	7	7	0	0	0	0	0	21	21
	Total	0	0	0	0	0	26	26	0	0	0	0	0	34	34
	East Leg														
	Approach	19	1	20	0	20	0	20	12	0	12	0	12	0	12
	Departure	5	0	5	0	5	0	5	38	2	40	0	40	0	40
	Total	24	1	25	0	25	0	25	50	2	52	0	52	0	52
	West Leg														
	Approach	5	0	5	0	5	7	12	38	2	40	0	40	21	61
	Departure	19	1	20	0	20	19	39	12	0	12	0	12	13	25
	Total	24	1	25	0	25	26	51	50	2	52	0	52	34	86
	Total Approaches														
	Approach	24	1	25	0	25	26	51	50	2	52	0	52	34	86
	Departure	24	1	25	0	25	26	51	50	2	52	0	52	34	86
	Total	48	2	50	0	50	52	102	100	4	104	0	104	68	172

Table B-4 - Year 2031 Without Project Peak Hour Volume Summary

	AM Peak Hour								PM Peak Hour								
	2,022 Total	2,040 Total	2022-2040 Growth	2022-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP	2,022 Total	2,040 Total	2020-2040 Growth	2020-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP	
1	. Mesa Linda Street/Eucalyptus Street																
	NBL	93	30	-63	-32	110	110	0	110	65	12	-53	-27	77	77	0	77
	NBT	38	3	-35	-18	45	45	0	45	41	90	49	25	25	66	0	66
	NBR	60	46	-14	-7	71	71	0	71	50	22	-28	-14	59	59	0	59
	SBL	2	11	9	5	5	7	0	7	1	7	6	3	3	4	0	4
	SBT	13	2	-11	-6	15	15	0	15	56	22	-34	-17	66	66	0	66
	SBR	30	50	20	10	10	40	0	40	20	29	9	5	5	25	0	25
	EBL	18	15	-3	-2	21	21	0	21	21	168	147	74	74	95	0	95
	EBT	30	67	37	19	19	49	7	56	114	170	56	28	28	142	21	163
	EBR	47	30	-17	-9	55	55	0	55	93	14	-79	-40	110	110	0	110
	WBL	20	11	-9	-5	24	24	0	24	78	64	-14	-7	92	92	0	92
	WBT	65	90	25	13	13	78	19	97	48	103	55	28	28	76	13	89
	WBR	0	2	2	1	1	1	0	1	0	59	59	30	30	30	0	30
	North Leg																
	Approach	45	63	18	9	30	62	0	62	77	58	-19	-10	74	95	0	95
	Departure	56	20	-36	-18	67	67	0	67	62	317	255	128	128	190	0	190
	Total	101	83	-18	-9	97	129	0	129	139	375	236	118	201	284	0	284
	South Leg																
	Approach	191	79	-112	-56	225	225	0	225	156	124	-32	-16	160	201	0	201
	Departure	80	43	-37	-19	94	94	0	94	227	100	-127	-64	268	268	0	268
	Total	271	122	-149	-75	320	320	0	320	383	224	-159	-80	428	469	0	469
	East Leg																
	Approach	85	103	18	9	37	102	19	121	126	226	100	50	149	197	13	210
	Departure	92	124	32	16	94	126	7	133	165	199	34	17	90	205	21	226
	Total	177	227	50	25	131	228	26	254	291	425	134	67	239	402	34	436
	West Leg																
	Approach	95	112	17	9	95	125	7	132	228	352	124	62	211	346	21	367
	Departure	188	170	-18	-9	132	227	19	246	133	144	11	6	109	177	13	190
	Total	283	282	-1	-1	227	352	26	378	361	496	135	68	320	523	34	557
	Total Approaches																
	Approach	416	357	-59	-30	388	515	26	541	587	760	173	87	594	839	34	873
	Departure	416	357	-59	-30	388	515	26	541	587	760	173	87	594	839	34	873
	Total	832	714	-118	-59	775	1,029	52	1,081	1,174	1,520	346	173	1,188	1,678	68	1,746

Table B-4 - Year 2031 Without Project Peak Hour Volume Summary

	AM Peak Hour								PM Peak Hour							
	2,022 Total	2,040 Total	2022-2040 Growth	2022-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP	2,022 Total	2,040 Total	2020-2040 Growth	2020-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP
2	. Topaz Road/Sycamore Street															
NBL	0	1	1	1	1	1	0	1	0	8	8	4	4	4	0	4
NBT	108	51	-57	-29	127	127	19	146	105	626	521	261	261	366	13	379
NBR	21	22	1	1	1	22	0	22	31	75	44	22	22	53	0	53
SBL	0	2	2	1	1	1	0	1	10	3	-7	-4	12	12	0	12
SBT	51	521	470	235	235	286	7	293	145	107	-38	-19	171	171	21	192
SBR	49	58	9	5	5	54	0	54	107	64	-43	-22	126	126	0	126
EBL	90	37	-53	-27	106	106	0	106	78	78	0	0	0	78	0	78
EBT	50	44	-6	-3	59	59	0	59	50	20	-30	-15	59	59	0	59
EBR	2	14	12	6	6	8	0	8	4	7	3	2	2	6	0	6
WBL	9	37	28	14	14	23	0	23	45	48	3	2	2	47	0	47
WBT	18	7	-11	-6	21	21	0	21	45	40	-5	-3	53	53	0	53
WBR	3	1	-2	-1	4	4	0	4	6	6	0	0	0	6	0	6
North Leg																
Approach	100	581	481	241	241	341	7	348	262	174	-88	-44	309	309	21	330
Departure	201	89	-112	-56	237	237	19	256	189	710	521	261	261	450	13	463
Total	301	670	369	185	478	578	26	604	451	884	433	217	570	759	34	793
South Leg																
Approach	129	74	-55	-28	128	149	19	168	136	709	573	287	287	423	13	436
Departure	62	572	510	255	255	317	7	324	194	162	-32	-16	174	223	21	244
Total	191	646	455	228	383	466	26	492	330	871	541	271	461	646	34	680
East Leg																
Approach	30	45	15	8	39	48	0	48	96	94	-2	-1	55	106	0	106
Departure	71	68	-3	-2	61	82	0	82	91	98	7	4	93	124	0	124
Total	101	113	12	6	99	129	0	129	187	192	5	3	147	229	0	229
West Leg																
Approach	142	95	-47	-24	171	173	0	173	132	105	-27	-14	61	143	0	143
Departure	67	66	-1	-1	26	75	0	75	152	112	-40	-20	183	183	0	183
Total	209	161	-48	-24	197	248	0	248	284	217	-67	-34	244	326	0	326
Total Approaches																
Approach	401	795	394	197	579	711	26	737	626	1,082	456	228	711	980	34	1,014
Departure	401	795	394	197	579	711	26	737	626	1,082	456	228	711	980	34	1,014
Total	802	1,590	788	394	1,158	1,422	52	1,474	1,252	2,164	912	456	1,422	1,960	68	2,028

Table B-4 - Year 2031 Without Project Peak Hour Volume Summary

	AM Peak Hour								PM Peak Hour							
	2,022 Total	2,040 Total	2022-2040 Growth	2022-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP	2,022 Total	2,040 Total	2020-2040 Growth	2020-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP
3 . Topaz Road/Eucalyptus Street																
NBL	0	0	0	0	0	0	9	9	0	1	1	1	1	1	6	7
NBT	0	12	12	6	6	6	9	15	0	324	324	162	162	162	6	168
NBR	0	22	22	11	11	11	0	11	0	48	48	24	24	24	0	24
SBL	0	173	173	87	87	87	3	90	6	48	42	21	21	27	11	38
SBT	0	325	325	163	163	163	3	166	0	20	20	10	10	10	11	21
SBR	64	114	50	25	25	89	0	89	158	87	-71	-36	186	186	0	186
EBL	115	38	-77	-39	136	136	0	136	120	178	58	29	29	149	0	149
EBT	5	192	187	94	94	99	3	102	32	57	25	13	13	45	11	56
EBR	0	0	0	0	0	0	3	3	0	0	0	0	0	0	11	11
WBL	0	30	30	15	15	15	0	15	0	29	29	15	15	15	0	15
WBT	18	19	1	1	1	19	9	28	9	177	168	84	84	93	6	99
WBR	2	35	33	17	17	19	9	28	3	242	239	120	120	123	6	129
North Leg																
Approach	64	612	548	274	274	338	6	344	164	155	-9	-5	217	223	22	245
Departure	117	85	-32	-16	158	160	18	178	123	744	621	311	311	434	12	446
Total	181	697	516	258	432	498	24	522	287	899	612	306	528	657	34	691
South Leg																
Approach	0	34	34	17	17	17	18	35	0	373	373	187	187	187	12	199
Departure	0	355	355	178	178	178	6	184	0	49	49	25	25	25	22	47
Total	0	389	389	195	195	195	24	219	0	422	422	211	211	211	34	245
East Leg																
Approach	20	84	64	32	32	52	18	70	12	448	436	218	218	230	12	242
Departure	5	387	382	191	191	196	6	202	38	153	115	58	58	96	22	118
Total	25	471	446	223	223	248	24	272	50	601	551	276	276	326	34	360
West Leg																
Approach	120	230	110	55	229	234	6	240	152	235	83	42	42	194	22	216
Departure	82	133	51	26	26	108	18	126	167	265	98	49	271	280	12	292
Total	202	363	161	81	255	342	24	366	319	500	181	91	312	473	34	507
Total Approaches																
Approach	204	960	756	378	552	641	48	689	328	1,211	883	442	663	833	68	901
Departure	204	960	756	378	552	641	48	689	328	1,211	883	442	663	833	68	901
Total	408	1,920	1,512	756	1,104	1,282	96	1,378	656	2,422	1,766	883	1,327	1,667	136	1,803

Table B-4 - Year 2031 Without Project Peak Hour Volume Summary

	AM Peak Hour								PM Peak Hour							
	2,022 Total	2,040 Total	2022-2040 Growth	2022-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP	2,022 Total	2,040 Total	2020-2040 Growth	2020-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP
4 . Topaz Road/Street A																
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	17	0	17	0	0	0	0	0	187	0	187
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	7	7	0	0	0	0	0	0	21	21
SBT	0	0	0	0	0	178	0	178	0	0	0	0	0	25	0	25
SBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	19	19	0	0	0	0	0	0	13	13
North Leg																
Approach	0	0	0	0	0	178	7	185	0	0	0	0	0	25	21	46
Departure	0	0	0	0	0	17	19	36	0	0	0	0	0	187	13	200
Total	0	0	0	0	0	195	26	221	0	0	0	0	0	211	34	245
South Leg																
Approach	0	0	0	0	0	17	0	17	0	0	0	0	0	187	0	187
Departure	0	0	0	0	0	178	0	178	0	0	0	0	0	25	0	25
Total	0	0	0	0	0	195	0	195	0	0	0	0	0	211	0	211
East Leg																
Approach	0	0	0	0	0	0	19	19	0	0	0	0	0	0	13	13
Departure	0	0	0	0	0	0	7	7	0	0	0	0	0	0	21	21
Total	0	0	0	0	0	0	26	26	0	0	0	0	0	0	34	34
West Leg																
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approaches																
Approach	0	0	0	0	0	195	26	221	0	0	0	0	0	211	34	245
Departure	0	0	0	0	0	195	26	221	0	0	0	0	0	211	34	245
Total	0	0	0	0	0	389	52	441	0	0	0	0	0	422	68	490

Table B-4 - Year 2031 Without Project Peak Hour Volume Summary

	AM Peak Hour								PM Peak Hour							
	2,022 Total	2,040 Total	2022-2040 Growth	2022-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP	2,022 Total	2,040 Total	2020-2040 Growth	2020-2031 Growth	2,022 Comp.	2,031 NP	Project Trips	2,031 WP
5 . Street B/Eucalyptus Street																
NBL	0	0	0	0	0	0	19	19	0	0	0	0	0	0	13	13
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	196	0	196	0	0	0	0	0	96	0	96
EBR	0	0	0	0	0	0	7	7	0	0	0	0	0	0	21	21
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	52	0	52	0	0	0	0	0	230	0	230
WBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Leg																
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Leg																
Approach	0	0	0	0	0	0	19	19	0	0	0	0	0	0	13	13
Departure	0	0	0	0	0	0	7	7	0	0	0	0	0	0	21	21
Total	0	0	0	0	0	0	26	26	0	0	0	0	0	0	34	34
East Leg																
Approach	0	0	0	0	0	52	0	52	0	0	0	0	0	230	0	230
Departure	0	0	0	0	0	196	0	196	0	0	0	0	0	96	0	96
Total	0	0	0	0	0	248	0	248	0	0	0	0	0	326	0	326
West Leg																
Approach	0	0	0	0	0	196	7	203	0	0	0	0	0	96	21	117
Departure	0	0	0	0	0	52	19	71	0	0	0	0	0	230	13	243
Total	0	0	0	0	0	248	26	274	0	0	0	0	0	326	34	360
Total Approaches																
Approach	0	0	0	0	0	248	26	274	0	0	0	0	0	326	34	360
Departure	0	0	0	0	0	248	26	274	0	0	0	0	0	326	34	360
Total	0	0	0	0	0	496	52	548	0	0	0	0	0	651	68	719

APPENDIX C: LEVEL OF SERVICE WORKSHEETS

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰			↰	
Traffic Vol, veh/h	9	15	32	9	44	0	48	5	26	2	2	26
Future Vol, veh/h	9	15	32	9	44	0	48	5	26	2	2	26
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	10	17	36	10	50	0	55	6	30	2	2	30
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.4	8	7.6	6.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	61%	38%	0%	17%	0%	7%
Vol Thru, %	6%	62%	0%	83%	100%	7%
Vol Right, %	33%	0%	100%	0%	0%	87%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	24	32	53	0	30
LT Vol	48	9	0	9	0	2
Through Vol	5	15	0	44	0	2
RT Vol	26	0	32	0	0	26
Lane Flow Rate	90	27	36	60	0	34
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.101	0.037	0.041	0.081	0	0.036
Departure Headway (Hd)	4.06	4.936	4.047	4.836	4.751	3.784
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	867	719	875	735	0	952
Service Time	2.157	2.707	1.817	2.604	2.519	1.784
HCM Lane V/C Ratio	0.104	0.038	0.041	0.082	0	0.036
HCM Control Delay	7.6	7.9	7	8	7.5	6.9
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	0.3	0.1	0.1	0.3	0	0.1

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 8.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	48	2	9	17	3	0	51	20	0	32	34
Future Vol, veh/h	46	48	2	9	17	3	0	51	20	0	32	34
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	53	56	2	10	20	3	0	59	23	0	37	40
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	8.3	8	8.4	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	0%	0%
Vol Thru, %	72%	0%	96%	0%	85%	100%	0%
Vol Right, %	28%	0%	4%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	46	50	9	20	32	34
LT Vol	0	46	0	9	0	0	0
Through Vol	51	0	48	0	17	32	0
RT Vol	20	0	2	0	3	0	34
Lane Flow Rate	83	53	58	10	23	37	40
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.11	0.081	0.079	0.016	0.032	0.051	0.047
Departure Headway (Hd)	4.791	5.418	4.888	5.494	4.886	4.949	4.247
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	751	664	735	654	735	726	846
Service Time	2.802	3.132	2.602	3.21	2.603	2.661	1.959
HCM Lane V/C Ratio	0.111	0.08	0.079	0.015	0.031	0.051	0.047
HCM Control Delay	8.4	8.6	8	8.3	7.8	7.9	7.2
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.3	0	0.1	0.2	0.1

HCM 6th TWSC
3: Eucalyptus St & Topaz Rd

02/03/2021

Intersection

Int Delay, s/veh 6.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	58	5	17	2	0	44
Future Vol, veh/h	58	5	17	2	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	85	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	78	7	23	3	0	59

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	26	0	0 188 25
Stage 1	-	-	- 25 -
Stage 2	-	-	- 163 -
Critical Hdwy	4.1	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	1601	-	- 806 1057
Stage 1	-	-	- 1003 -
Stage 2	-	-	- 871 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1601	-	- 767 1057
Mov Cap-2 Maneuver	-	-	- 767 -
Stage 1	-	-	- 954 -
Stage 2	-	-	- 871 -

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1601	-	-	-	1057
HCM Lane V/C Ratio	0.049	-	-	-	0.056
HCM Control Delay (s)	7.4	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔			↔	
Traffic Vol, veh/h	14	87	43	39	26	0	35	18	27	1	18	10
Future Vol, veh/h	14	87	43	39	26	0	35	18	27	1	18	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	91	45	41	27	0	36	19	28	1	19	10
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8	8.5	7.8	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	44%	14%	0%	60%	0%	3%
Vol Thru, %	22%	86%	0%	40%	100%	62%
Vol Right, %	34%	0%	100%	0%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	101	43	65	0	29
LT Vol	35	14	0	39	0	1
Through Vol	18	87	0	26	0	18
RT Vol	27	0	43	0	0	10
Lane Flow Rate	83	105	45	68	0	30
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.101	0.14	0.05	0.097	0	0.036
Departure Headway (Hd)	4.347	4.804	4.033	5.182	4.881	4.322
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	829	736	873	694	0	832
Service Time	2.35	2.599	1.827	2.893	2.592	2.328
HCM Lane V/C Ratio	0.1	0.143	0.052	0.098	0	0.036
HCM Control Delay	7.8	8.4	7	8.5	7.6	7.5
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	0.3	0.5	0.2	0.3	0	0.1

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 8.7

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	48	4	43	43	6	0	65	30	10	79	57
Future Vol, veh/h	48	48	4	43	43	6	0	65	30	10	79	57
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	55	55	5	49	49	7	0	75	34	11	91	66
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	8.8	8.7	9.1	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	11%	0%
Vol Thru, %	68%	0%	92%	0%	88%	89%	0%
Vol Right, %	32%	0%	8%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	48	52	43	49	89	57
LT Vol	0	48	0	43	0	10	0
Through Vol	65	0	48	0	43	79	0
RT Vol	30	0	4	0	6	0	57
Lane Flow Rate	109	55	60	49	56	102	66
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.155	0.089	0.087	0.08	0.082	0.149	0.082
Departure Headway (Hd)	5.095	5.806	5.248	5.818	5.228	5.254	4.494
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	702	616	681	615	683	681	795
Service Time	3.136	3.553	2.995	3.564	2.974	2.992	2.232
HCM Lane V/C Ratio	0.155	0.089	0.088	0.08	0.082	0.15	0.083
HCM Control Delay	9.1	9.1	8.5	9.1	8.4	8.9	7.6
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.3	0.3	0.3	0.5	0.3

HCM 6th TWSC
3: Eucalyptus St & Topaz Rd

02/03/2021

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	80	31	9	3	6	91
Future Vol, veh/h	80	31	9	3	6	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	85	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	90	35	10	3	7	102

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	13	0	0 227 12
Stage 1	-	-	- 12 -
Stage 2	-	-	- 215 -
Critical Hdwy	4.1	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	1619	-	- 766 1074
Stage 1	-	-	- 1016 -
Stage 2	-	-	- 826 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1619	-	- 723 1074
Mov Cap-2 Maneuver	-	-	- 723 -
Stage 1	-	-	- 959 -
Stage 2	-	-	- 826 -

Approach	EB	WB	SB
HCM Control Delay, s	5.3	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1043
HCM Lane V/C Ratio	0.056	-	-	-	0.104
HCM Control Delay (s)	7.4	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰			↰	
Traffic Vol, veh/h	9	22	32	9	63	0	48	5	26	2	2	26
Future Vol, veh/h	9	22	32	9	63	0	48	5	26	2	2	26
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	10	25	36	10	72	0	55	6	30	2	2	30
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.4	8.2	7.7	7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	61%	29%	0%	12%	0%	7%
Vol Thru, %	6%	71%	0%	88%	100%	7%
Vol Right, %	33%	0%	100%	0%	0%	87%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	31	32	72	0	30
LT Vol	48	9	0	9	0	2
Through Vol	5	22	0	63	0	2
RT Vol	26	0	32	0	0	26
Lane Flow Rate	90	35	36	82	0	34
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.105	0.048	0.041	0.109	0	0.037
Departure Headway (Hd)	4.23	4.906	4.058	4.818	4.755	3.86
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	852	721	869	736	0	933
Service Time	2.231	2.693	1.845	2.599	2.536	1.862
HCM Lane V/C Ratio	0.106	0.049	0.041	0.111	0	0.036
HCM Control Delay	7.7	7.9	7	8.2	7.5	7
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	0.4	0.2	0.1	0.4	0	0.1

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	48	2	9	17	3	0	70	20	0	39	34
Future Vol, veh/h	46	48	2	9	17	3	0	70	20	0	39	34
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	53	56	2	10	20	3	0	81	23	0	45	40
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	8.4	8.1	8.6	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	0%	0%
Vol Thru, %	78%	0%	96%	0%	85%	100%	0%
Vol Right, %	22%	0%	4%	0%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	46	50	9	20	39	34
LT Vol	0	46	0	9	0	0	0
Through Vol	70	0	48	0	17	39	0
RT Vol	20	0	2	0	3	0	34
Lane Flow Rate	105	53	58	10	23	45	40
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.141	0.082	0.08	0.016	0.032	0.063	0.047
Departure Headway (Hd)	4.838	5.496	4.966	5.576	4.968	4.972	4.27
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	743	654	723	643	722	722	841
Service Time	2.852	3.214	2.684	3.298	2.689	2.687	1.984
HCM Lane V/C Ratio	0.141	0.081	0.08	0.016	0.032	0.062	0.048
HCM Control Delay	8.6	8.7	8.1	8.4	7.9	8	7.2
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.3	0	0.1	0.2	0.1

HCM 6th TWSC

3: Topaz St/Topaz Rd & Eucalyptus St

02/03/2021

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	8	3	0	26	11	9	9	0	3	3	44
Future Vol, veh/h	58	8	3	0	26	11	9	9	0	3	3	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	78	11	4	0	35	15	12	12	0	4	4	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	15	0	0	243	219	13	218	214	43
Stage 1	-	-	-	-	-	-	169	169	-	43	43	-
Stage 2	-	-	-	-	-	-	74	50	-	175	171	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1570	-	-	1616	-	-	715	683	1073	743	687	1033
Stage 1	-	-	-	-	-	-	838	763	-	976	863	-
Stage 2	-	-	-	-	-	-	940	857	-	832	761	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1570	-	-	1616	-	-	645	649	1073	704	653	1033
Mov Cap-2 Maneuver	-	-	-	-	-	-	645	649	-	704	653	-
Stage 1	-	-	-	-	-	-	796	725	-	927	863	-
Stage 2	-	-	-	-	-	-	882	857	-	777	723	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	6.2			0			10.8			9		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	647	1570	-	-	1616	-	-	972
HCM Lane V/C Ratio	0.038	0.05	-	-	-	-	-	0.07
HCM Control Delay (s)	10.8	7.4	-	-	0	-	-	9
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.2

HCM 6th TWSC
4: Topaz St & Street A

02/03/2021

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	0	0	7	0
Future Vol, veh/h	0	19	0	0	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	21	0	0	8	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	16	0	0
Stage 1	0	-	-
Stage 2	16	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	1008	-	-
Stage 1	-	-	-
Stage 2	1012	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1008	-	-
Mov Cap-2 Maneuver	1008	-	-
Stage 1	-	-	-
Stage 2	1012	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	-
HCM Lane LOS	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

HCM 6th TWSC
5: Street B & Eucalyptus St

02/03/2021

Intersection

Int Delay, s/veh 3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	7	0	19	19	0
Future Vol, veh/h	5	7	0	19	19	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	8	0	21	21	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	13
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1619
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1619
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	989	-	-	1619	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh 8.2
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰			↰	
Traffic Vol, veh/h	14	108	43	39	39	0	35	18	27	1	18	10
Future Vol, veh/h	14	108	43	39	39	0	35	18	27	1	18	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	15	113	45	41	41	0	36	19	28	1	19	10
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.2	8.5	8	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	44%	11%	0%	50%	0%	3%
Vol Thru, %	22%	89%	0%	50%	100%	62%
Vol Right, %	34%	0%	100%	0%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	122	43	78	0	29
LT Vol	35	14	0	39	0	1
Through Vol	18	108	0	39	0	18
RT Vol	27	0	43	0	0	10
Lane Flow Rate	83	127	45	81	0	30
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.103	0.173	0.052	0.116	0	0.037
Departure Headway (Hd)	4.432	4.905	4.145	5.153	4.902	4.41
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	811	736	869	697	0	813
Service Time	2.448	2.605	1.845	2.872	2.621	2.429
HCM Lane V/C Ratio	0.102	0.173	0.052	0.116	0	0.037
HCM Control Delay	8	8.6	7.1	8.5	7.6	7.6
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	0.3	0.6	0.2	0.4	0	0.1

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 8.9

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	48	4	43	43	6	0	78	30	10	100	57
Future Vol, veh/h	48	48	4	43	43	6	0	78	30	10	100	57
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	55	55	5	49	49	7	0	90	34	11	115	66
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	8.9	8.9	9.3	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	9%	0%
Vol Thru, %	72%	0%	92%	0%	88%	91%	0%
Vol Right, %	28%	0%	8%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	48	52	43	49	110	57
LT Vol	0	48	0	43	0	10	0
Through Vol	78	0	48	0	43	100	0
RT Vol	30	0	4	0	6	0	57
Lane Flow Rate	124	55	60	49	56	126	66
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.178	0.091	0.089	0.081	0.083	0.185	0.082
Departure Headway (Hd)	5.155	5.91	5.352	5.923	5.332	5.266	4.517
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	694	604	666	603	669	680	790
Service Time	3.203	3.666	3.107	3.68	3.089	3.01	2.26
HCM Lane V/C Ratio	0.179	0.091	0.09	0.081	0.084	0.185	0.084
HCM Control Delay	9.3	9.3	8.6	9.2	8.6	9.2	7.7
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.6	0.3	0.3	0.3	0.3	0.7	0.3

HCM 6th TWSC
3: Topaz St/Topaz Rd & Eucalyptus St

02/03/2021

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	42	11	0	15	9	6	6	0	17	11	91
Future Vol, veh/h	80	42	11	0	15	9	6	6	0	17	11	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	90	47	12	0	17	10	7	7	0	19	12	102
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	59	0	0	312	260	53	259	261	22
Stage 1	-	-	-	-	-	-	233	233	-	22	22	-
Stage 2	-	-	-	-	-	-	79	27	-	237	239	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1600	-	-	1558	-	-	644	648	1020	698	647	1061
Stage 1	-	-	-	-	-	-	775	716	-	1002	881	-
Stage 2	-	-	-	-	-	-	935	877	-	771	711	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1600	-	-	1558	-	-	549	612	1020	662	611	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	549	612	-	662	611	-
Stage 1	-	-	-	-	-	-	732	676	-	946	881	-
Stage 2	-	-	-	-	-	-	833	877	-	720	671	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	4.4		0				11.4			9.6		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	579	1600	-	-	1558	-	-	919				
HCM Lane V/C Ratio	0.023	0.056	-	-	-	-	-	0.145				
HCM Control Delay (s)	11.4	7.4	-	-	0	-	-	9.6				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.5				

HCM 6th TWSC
4: Topaz St & Street A

02/03/2021

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	0	0	21	0
Future Vol, veh/h	0	13	0	0	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	14	0	0	23	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	46	0	0
Stage 1	0	-	-
Stage 2	46	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	969	-	-
Stage 1	-	-	-
Stage 2	982	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	969	-	-
Mov Cap-2 Maneuver	969	-	-
Stage 1	-	-	-
Stage 2	982	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	-
HCM Lane LOS	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

HCM 6th TWSC
5: Street B & Eucalyptus St

02/03/2021

Intersection

Int Delay, s/veh 1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	21	0	12	13	0
Future Vol, veh/h	38	21	0	12	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	23	0	13	14	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	64
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1551
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1551
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	944	-	-	1551	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰↱			↰↱	
Traffic Vol, veh/h	18	30	47	20	65	0	93	38	60	2	13	30
Future Vol, veh/h	18	30	47	20	65	0	93	38	60	2	13	30
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	34	53	23	74	0	106	43	68	2	15	34
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.1	9	9	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	49%	38%	0%	24%	0%	4%
Vol Thru, %	20%	62%	0%	76%	100%	29%
Vol Right, %	31%	0%	100%	0%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	48	47	85	0	45
LT Vol	93	18	0	20	0	2
Through Vol	38	30	0	65	0	13
RT Vol	60	0	47	0	0	30
Lane Flow Rate	217	55	53	97	0	51
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.264	0.082	0.067	0.143	0	0.061
Departure Headway (Hd)	4.386	5.396	4.502	5.333	5.215	4.275
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	820	664	794	672	0	837
Service Time	2.41	3.13	2.236	3.068	2.95	2.307
HCM Lane V/C Ratio	0.265	0.083	0.067	0.144	0	0.061
HCM Control Delay	9	8.6	7.6	9	8	7.6
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	1.1	0.3	0.2	0.5	0	0.2

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 8.9

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	50	2	9	18	3	0	108	21	0	51	49
Future Vol, veh/h	90	50	2	9	18	3	0	108	21	0	51	49
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	105	58	2	10	21	3	0	126	24	0	59	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	9.2	8.4	9.5	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	0%	0%
Vol Thru, %	84%	0%	96%	0%	86%	100%	0%
Vol Right, %	16%	0%	4%	0%	14%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	129	90	52	9	21	51	49
LT Vol	0	90	0	9	0	0	0
Through Vol	108	0	50	0	18	51	0
RT Vol	21	0	2	0	3	0	49
Lane Flow Rate	150	105	60	10	24	59	57
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.211	0.166	0.087	0.017	0.036	0.085	0.071
Departure Headway (Hd)	5.069	5.699	5.169	5.853	5.248	5.186	4.483
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	708	629	692	611	681	690	798
Service Time	3.101	3.435	2.905	3.598	2.993	2.92	2.216
HCM Lane V/C Ratio	0.212	0.167	0.087	0.016	0.035	0.086	0.071
HCM Control Delay	9.5	9.6	8.4	8.7	8.2	8.4	7.6
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.8	0.6	0.3	0.1	0.1	0.3	0.2

HCM 6th TWSC
3: Eucalyptus St & Topaz Rd

02/03/2021

Intersection

Int Delay, s/veh 7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	115	5	18	2	0	64
Future Vol, veh/h	115	5	18	2	0	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	85	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	155	7	24	3	0	86

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	27	0	0 343 26
Stage 1	-	-	- 26 -
Stage 2	-	-	- 317 -
Critical Hdwy	4.1	-	- 6.4 6.2
Critical Hdwy Stg 1	-	-	- 5.4 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	1600	-	- 657 1056
Stage 1	-	-	- 1002 -
Stage 2	-	-	- 743 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1600	-	- 593 1056
Mov Cap-2 Maneuver	-	-	- 593 -
Stage 1	-	-	- 905 -
Stage 2	-	-	- 743 -

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1600	-	-	-	1056
HCM Lane V/C Ratio	0.097	-	-	-	0.082
HCM Control Delay (s)	7.5	-	-	-	8.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰↱			↰↱	
Traffic Vol, veh/h	21	114	93	78	48	0	65	41	50	1	56	20
Future Vol, veh/h	21	114	93	78	48	0	65	41	50	1	56	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	119	97	81	50	0	68	43	52	1	58	21
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.8	9.9	9.2	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	42%	16%	0%	62%	0%	1%
Vol Thru, %	26%	84%	0%	38%	100%	73%
Vol Right, %	32%	0%	100%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	156	135	93	126	0	77
LT Vol	65	21	0	78	0	1
Through Vol	41	114	0	48	0	56
RT Vol	50	0	93	0	0	20
Lane Flow Rate	163	141	97	131	0	80
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.217	0.207	0.122	0.205	0	0.109
Departure Headway (Hd)	4.807	5.307	4.524	5.636	5.324	4.874
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	744	674	788	634	0	731
Service Time	2.857	3.065	2.281	3.401	3.088	2.933
HCM Lane V/C Ratio	0.219	0.209	0.123	0.207	0	0.109
HCM Control Delay	9.2	9.5	7.9	9.9	8.1	8.5
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	0.8	0.8	0.4	0.8	0	0.4

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 9.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	50	4	45	45	6	0	105	31	10	145	107
Future Vol, veh/h	78	50	4	45	45	6	0	105	31	10	145	107
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	90	57	5	52	52	7	0	121	36	11	167	123
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	9.9	9.5	10.3	9.5
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	6%	0%
Vol Thru, %	77%	0%	93%	0%	88%	94%	0%
Vol Right, %	23%	0%	7%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	136	78	54	45	51	155	107
LT Vol	0	78	0	45	0	10	0
Through Vol	105	0	50	0	45	145	0
RT Vol	31	0	4	0	6	0	107
Lane Flow Rate	156	90	62	52	59	178	123
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.241	0.159	0.1	0.093	0.095	0.269	0.161
Departure Headway (Hd)	5.56	6.376	5.817	6.444	5.854	5.444	4.706
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	650	565	619	559	615	652	751
Service Time	3.56	4.086	3.528	4.156	3.565	3.238	2.5
HCM Lane V/C Ratio	0.24	0.159	0.1	0.093	0.096	0.273	0.164
HCM Control Delay	10.3	10.3	9.2	9.8	9.2	10.3	8.4
HCM Lane LOS	B	B	A	A	A	B	A
HCM 95th-tile Q	0.9	0.6	0.3	0.3	0.3	1.1	0.6

HCM 6th TWSC
3: Eucalyptus St & Topaz Rd

02/03/2021

Intersection

Int Delay, s/veh 7.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	120	32	9	3	6	158
Future Vol, veh/h	120	32	9	3	6	158
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	85	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	135	36	10	3	7	178

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	13	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1619	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1619	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	5.9	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1046
HCM Lane V/C Ratio	0.083	-	-	-	0.176
HCM Control Delay (s)	7.4	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh 8.8
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔			↔	
Traffic Vol, veh/h	18	37	47	20	84	0	93	38	60	2	13	30
Future Vol, veh/h	18	37	47	20	84	0	93	38	60	2	13	30
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	42	53	23	95	0	106	43	68	2	15	34
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.2	9.2	9.1	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	49%	33%	0%	19%	0%	4%
Vol Thru, %	20%	67%	0%	81%	100%	29%
Vol Right, %	31%	0%	100%	0%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	55	47	104	0	45
LT Vol	93	18	0	20	0	2
Through Vol	38	37	0	84	0	13
RT Vol	60	0	47	0	0	30
Lane Flow Rate	217	62	53	118	0	51
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.269	0.094	0.067	0.175	0	0.062
Departure Headway (Hd)	4.464	5.404	4.534	5.328	5.231	4.36
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	805	663	788	672	0	819
Service Time	2.492	3.143	2.273	3.068	2.971	2.398
HCM Lane V/C Ratio	0.27	0.094	0.067	0.176	0	0.062
HCM Control Delay	9.1	8.7	7.6	9.2	8	7.7
HCM Lane LOS	A	A	A	A	N	A
HCM 95th-tile Q	1.1	0.3	0.2	0.6	0	0.2

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh 9.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	50	2	9	18	3	0	127	21	0	58	49
Future Vol, veh/h	90	50	2	9	18	3	0	127	21	0	58	49
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	105	58	2	10	21	3	0	148	24	0	67	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	9.3	8.5	9.8	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	0%	0%
Vol Thru, %	86%	0%	96%	0%	86%	100%	0%
Vol Right, %	14%	0%	4%	0%	14%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	90	52	9	21	58	49
LT Vol	0	90	0	9	0	0	0
Through Vol	127	0	50	0	18	58	0
RT Vol	21	0	2	0	3	0	49
Lane Flow Rate	172	105	60	10	24	67	57
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.244	0.168	0.088	0.017	0.036	0.098	0.071
Departure Headway (Hd)	5.097	5.778	5.248	5.94	5.334	5.215	4.511
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	704	620	681	601	669	687	793
Service Time	3.131	3.521	2.99	3.692	3.087	2.951	2.247
HCM Lane V/C Ratio	0.244	0.169	0.088	0.017	0.036	0.098	0.072
HCM Control Delay	9.8	9.7	8.5	8.8	8.3	8.5	7.6
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	1	0.6	0.3	0.1	0.1	0.3	0.2

HCM 6th TWSC
3: Topaz St/Topaz Rd & Eucalyptus St

02/03/2021

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	115	8	3	0	27	11	9	9	0	3	3	64
Future Vol, veh/h	115	8	3	0	27	11	9	9	0	3	3	64
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	155	11	4	0	36	15	12	12	0	4	4	86
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	51	0	0	15	0	0	412	374	13	373	369	44
Stage 1	-	-	-	-	-	-	323	323	-	44	44	-
Stage 2	-	-	-	-	-	-	89	51	-	329	325	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1568	-	-	1616	-	-	554	560	1073	588	563	1032
Stage 1	-	-	-	-	-	-	693	654	-	975	862	-
Stage 2	-	-	-	-	-	-	923	856	-	688	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1568	-	-	1616	-	-	466	505	1073	534	507	1032
Mov Cap-2 Maneuver	-	-	-	-	-	-	466	505	-	534	507	-
Stage 1	-	-	-	-	-	-	624	589	-	878	862	-
Stage 2	-	-	-	-	-	-	842	856	-	607	588	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	6.9			0			12.8			9.2		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	485	1568	-	-	1616	-	-	952				
HCM Lane V/C Ratio	0.05	0.099	-	-	-	-	-	0.099				
HCM Control Delay (s)	12.8	7.5	-	-	0	-	-	9.2				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	0.3				

HCM 6th TWSC
4: Topaz St & Street A

02/03/2021

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	0	0	7	0
Future Vol, veh/h	0	19	0	0	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	21	0	0	8	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	16	0	0
Stage 1	0	-	-
Stage 2	16	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	1008	-	-
Stage 1	-	-	-
Stage 2	1012	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1008	-	-
Mov Cap-2 Maneuver	1008	-	-
Stage 1	-	-	-
Stage 2	1012	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	-
HCM Lane LOS	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

HCM 6th TWSC
5: Street B & Eucalyptus St

02/03/2021

Intersection

Int Delay, s/veh 3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	7	0	20	19	0
Future Vol, veh/h	5	7	0	20	19	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	5	8	0	22	21	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	13
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1619
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1619
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	988	-	-	1619	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/03/2021

Intersection

Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰↱			↰↱	
Traffic Vol, veh/h	21	135	93	78	61	0	65	41	50	1	56	20
Future Vol, veh/h	21	135	93	78	61	0	65	41	50	1	56	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	141	97	81	64	0	68	43	52	1	58	21
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.1	10.1	9.4	8.7
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	42%	13%	0%	56%	0%	1%
Vol Thru, %	26%	87%	0%	44%	100%	73%
Vol Right, %	32%	0%	100%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	156	156	93	139	0	77
LT Vol	65	21	0	78	0	1
Through Vol	41	135	0	61	0	56
RT Vol	50	0	93	0	0	20
Lane Flow Rate	163	162	97	145	0	80
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.221	0.24	0.122	0.227	0	0.111
Departure Headway (Hd)	4.895	5.32	4.547	5.64	5.356	4.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	730	671	783	633	0	716
Service Time	2.953	3.084	2.31	3.41	3.127	3.036
HCM Lane V/C Ratio	0.223	0.241	0.124	0.229	0	0.112
HCM Control Delay	9.4	9.8	7.9	10.1	8.1	8.7
HCM Lane LOS	A	A	A	B	N	A
HCM 95th-tile Q	0.8	0.9	0.4	0.9	0	0.4

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/03/2021

Intersection

Intersection Delay, s/veh10.1

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	50	4	45	45	6	0	118	31	10	166	107
Future Vol, veh/h	78	50	4	45	45	6	0	118	31	10	166	107
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	90	57	5	52	52	7	0	136	36	11	191	123
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	10	9.6	10.7	9.9
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	6%	0%
Vol Thru, %	79%	0%	93%	0%	88%	94%	0%
Vol Right, %	21%	0%	7%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	78	54	45	51	176	107
LT Vol	0	78	0	45	0	10	0
Through Vol	118	0	50	0	45	166	0
RT Vol	31	0	4	0	6	0	107
Lane Flow Rate	171	90	62	52	59	202	123
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.267	0.162	0.102	0.094	0.097	0.307	0.162
Departure Headway (Hd)	5.622	6.491	5.932	6.563	5.972	5.571	4.837
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	642	555	606	548	602	649	747
Service Time	3.622	4.203	3.644	4.277	3.686	3.271	2.537
HCM Lane V/C Ratio	0.266	0.162	0.102	0.095	0.098	0.311	0.165
HCM Control Delay	10.7	10.5	9.3	10	9.3	10.7	8.5
HCM Lane LOS	B	B	A	A	A	B	A
HCM 95th-tile Q	1.1	0.6	0.3	0.3	0.3	1.3	0.6

HCM 6th TWSC
3: Topaz St/Topaz Rd & Eucalyptus St

02/03/2021

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	43	11	0	15	9	6	6	0	17	11	158
Future Vol, veh/h	120	43	11	0	15	9	6	6	0	17	11	158
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	135	48	12	0	17	10	7	7	0	19	12	178
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	60	0	0	441	351	54	350	352	22
Stage 1	-	-	-	-	-	-	324	324	-	22	22	-
Stage 2	-	-	-	-	-	-	117	27	-	328	330	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1600	-	-	1556	-	-	530	577	1019	608	576	1061
Stage 1	-	-	-	-	-	-	692	653	-	1002	881	-
Stage 2	-	-	-	-	-	-	892	877	-	689	649	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1600	-	-	1556	-	-	405	529	1019	563	528	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	405	529	-	563	528	-
Stage 1	-	-	-	-	-	-	634	598	-	918	881	-
Stage 2	-	-	-	-	-	-	732	877	-	624	594	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	5.1			0			13.1			10		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	459	1600	-	-	1556	-	-	930				
HCM Lane V/C Ratio	0.029	0.084	-	-	-	-	-	0.225				
HCM Control Delay (s)	13.1	7.5	-	-	0	-	-	10				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile O(veh)	0.1	0.3	-	-	0	-	-	0.9				

HCM 6th TWSC
4: Topaz St & Street A

02/03/2021

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	0	0	21	0
Future Vol, veh/h	0	13	0	0	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	14	0	0	23	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	46	0	0
Stage 1	0	-	-
Stage 2	46	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	969	-	-
Stage 1	-	-	-
Stage 2	982	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	969	-	-
Mov Cap-2 Maneuver	969	-	-
Stage 1	-	-	-
Stage 2	982	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	-
HCM Lane LOS	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

HCM 6th TWSC
5: Street B & Eucalyptus St

02/03/2021

Intersection

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	40	21	0	12	13	0
Future Vol, veh/h	40	21	0	12	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	23	0	13	14	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	66
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1549
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1549
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	942	-	-	1549	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/04/2021

Intersection

Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰↱			↰↱	
Traffic Vol, veh/h	21	49	55	24	78	1	110	45	71	7	15	40
Future Vol, veh/h	21	49	55	24	78	1	110	45	71	7	15	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	52	58	25	82	1	116	47	75	7	16	42
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.4	9.3	9.4	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	49%	30%	0%	24%	0%	11%
Vol Thru, %	20%	70%	0%	76%	0%	24%
Vol Right, %	31%	0%	100%	0%	100%	65%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	226	70	55	102	1	62
LT Vol	110	21	0	24	0	7
Through Vol	45	49	0	78	0	15
RT Vol	71	0	55	0	1	40
Lane Flow Rate	238	74	58	107	1	65
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.297	0.112	0.074	0.163	0.001	0.08
Departure Headway (Hd)	4.493	5.468	4.611	5.453	4.628	4.426
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	799	654	773	656	770	807
Service Time	2.525	3.217	2.359	3.202	2.377	2.47
HCM Lane V/C Ratio	0.298	0.113	0.075	0.163	0.001	0.081
HCM Control Delay	9.4	8.9	7.7	9.3	7.4	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	1.2	0.4	0.2	0.6	0	0.3

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/04/2021

Intersection

Intersection Delay, s/veh 11

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	59	8	23	21	4	1	127	22	1	286	54
Future Vol, veh/h	106	59	8	23	21	4	1	127	22	1	286	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	112	62	8	24	22	4	1	134	23	1	301	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	10.3	9.4	10.5	11.8
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	100%	0%	100%	0%	0%	0%
Vol Thru, %	85%	0%	88%	0%	84%	100%	0%
Vol Right, %	15%	0%	12%	0%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	106	67	23	25	287	54
LT Vol	1	106	0	23	0	1	0
Through Vol	127	0	59	0	21	286	0
RT Vol	22	0	8	0	4	0	54
Lane Flow Rate	158	112	71	24	26	302	57
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.247	0.201	0.115	0.045	0.044	0.448	0.073
Departure Headway (Hd)	5.63	6.474	5.882	6.707	6.085	5.343	4.637
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	641	557	612	536	591	668	762
Service Time	3.63	4.183	3.592	4.422	3.8	3.135	2.428
HCM Lane V/C Ratio	0.246	0.201	0.116	0.045	0.044	0.452	0.075
HCM Control Delay	10.5	10.8	9.4	9.7	9.1	12.5	7.8
HCM Lane LOS	B	B	A	A	A	B	A
HCM 95th-tile Q	1	0.7	0.4	0.1	0.1	2.3	0.2

HCM 6th TWSC
3: Eucalyptus St & Topaz Rd

02/04/2021

Intersection												
Int Delay, s/veh	14.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	136	99	0	15	19	19	0	6	11	87	163	89
Future Vol, veh/h	136	99	0	15	19	19	0	6	11	87	163	89
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	143	104	0	16	20	20	0	6	12	92	172	94
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	40	0	0	104	0	0	585	462	104	461	452	30
Stage 1	-	-	-	-	-	-	390	390	-	62	62	-
Stage 2	-	-	-	-	-	-	195	72	-	399	390	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1583	-	-	1500	-	-	425	500	956	514	506	1050
Stage 1	-	-	-	-	-	-	638	611	-	954	847	-
Stage 2	-	-	-	-	-	-	811	839	-	631	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1583	-	-	1500	-	-	254	450	956	464	455	1050
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	450	-	464	455	-
Stage 1	-	-	-	-	-	-	581	556	-	868	838	-
Stage 2	-	-	-	-	-	-	581	830	-	561	556	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			2.1			10.4			23.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	684	1583	-	-	1500	-	-	538				
HCM Lane V/C Ratio	0.026	0.09	-	-	0.011	-	-	0.663				
HCM Control Delay (s)	10.4	7.5	-	-	7.4	-	-	23.9				
HCM Lane LOS	B	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	4.9				

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/04/2021

Intersection

Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰↱			↰↱	
Traffic Vol, veh/h	95	142	110	92	76	30	77	66	59	4	66	25
Future Vol, veh/h	95	142	110	92	76	30	77	66	59	4	66	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	99	148	115	96	79	31	80	69	61	4	69	26
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.3	11	11	9.7
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	38%	40%	0%	55%	0%	4%
Vol Thru, %	33%	60%	0%	45%	0%	69%
Vol Right, %	29%	0%	100%	0%	100%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	237	110	168	30	95
LT Vol	77	95	0	92	0	4
Through Vol	66	142	0	76	0	66
RT Vol	59	0	110	0	30	25
Lane Flow Rate	210	247	115	175	31	99
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.319	0.403	0.158	0.299	0.045	0.155
Departure Headway (Hd)	5.458	5.883	4.971	6.141	5.154	5.625
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	659	612	722	586	694	636
Service Time	3.494	3.614	2.702	3.876	2.888	3.668
HCM Lane V/C Ratio	0.319	0.404	0.159	0.299	0.045	0.156
HCM Control Delay	11	12.5	8.6	11.5	8.1	9.7
HCM Lane LOS	B	B	A	B	A	A
HCM 95th-tile Q	1.4	1.9	0.6	1.2	0.1	0.5

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/04/2021

Intersection

Intersection Delay, s/veh15.7

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	59	6	47	53	6	4	366	53	12	171	126
Future Vol, veh/h	78	59	6	47	53	6	4	366	53	12	171	126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	82	62	6	49	56	6	4	385	56	13	180	133
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	11.1	10.8	22.1	10.7
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	100%	0%	100%	0%	7%	0%
Vol Thru, %	87%	0%	91%	0%	90%	93%	0%
Vol Right, %	13%	0%	9%	0%	10%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	423	78	65	47	59	183	126
LT Vol	4	78	0	47	0	12	0
Through Vol	366	0	59	0	53	171	0
RT Vol	53	0	6	0	6	0	126
Lane Flow Rate	445	82	68	49	62	193	133
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.715	0.168	0.129	0.102	0.118	0.323	0.195
Departure Headway (Hd)	5.781	7.352	6.775	7.449	6.864	6.04	5.296
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	623	487	528	479	520	593	675
Service Time	3.825	5.116	4.538	5.218	4.632	3.792	3.048
HCM Lane V/C Ratio	0.714	0.168	0.129	0.102	0.119	0.325	0.197
HCM Control Delay	22.1	11.6	10.5	11.1	10.6	11.7	9.3
HCM Lane LOS	C	B	B	B	B	B	A
HCM 95th-tile Q	5.9	0.6	0.4	0.3	0.4	1.4	0.7

HCM 6th TWSC
3: Eucalyptus St & Topaz Rd

02/04/2021

Intersection												
Int Delay, s/veh	10.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	149	45	0	15	93	123	1	162	24	27	10	186
Future Vol, veh/h	149	45	0	15	93	123	1	162	24	27	10	186
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	92	92	95	95	92	92	92	95	92	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	157	47	0	16	98	129	1	176	26	28	11	196
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	227	0	0	47	0	0	659	620	47	657	556	163
Stage 1	-	-	-	-	-	-	361	361	-	195	195	-
Stage 2	-	-	-	-	-	-	298	259	-	462	361	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1353	-	-	1573	-	-	380	407	1028	381	442	887
Stage 1	-	-	-	-	-	-	662	629	-	811	743	-
Stage 2	-	-	-	-	-	-	715	697	-	584	629	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1353	-	-	1573	-	-	262	356	1028	207	387	887
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	356	-	207	387	-
Stage 1	-	-	-	-	-	-	585	556	-	717	736	-
Stage 2	-	-	-	-	-	-	543	690	-	344	556	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	6.2			0.5			24			14.6		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	388	1353	-	-	1573	-	-	609				
HCM Lane V/C Ratio	0.524	0.116	-	-	0.01	-	-	0.386				
HCM Control Delay (s)	24	8	-	-	7.3	-	-	14.6				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	2.9	0.4	-	-	0	-	-	1.8				

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/04/2021

Intersection

Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔			↔	
Traffic Vol, veh/h	21	56	55	24	97	1	110	45	71	7	15	40
Future Vol, veh/h	21	56	55	24	97	1	110	45	71	7	15	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	22	59	58	25	102	1	116	47	75	7	16	42
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.5	9.5	9.6	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	49%	27%	0%	20%	0%	11%
Vol Thru, %	20%	73%	0%	80%	0%	24%
Vol Right, %	31%	0%	100%	0%	100%	65%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	226	77	55	121	1	62
LT Vol	110	21	0	24	0	7
Through Vol	45	56	0	97	0	15
RT Vol	71	0	55	0	1	40
Lane Flow Rate	238	81	58	127	1	65
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.302	0.124	0.075	0.193	0.001	0.082
Departure Headway (Hd)	4.567	5.486	4.642	5.451	4.645	4.506
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	785	651	767	656	766	790
Service Time	2.604	3.241	2.397	3.208	2.401	2.559
HCM Lane V/C Ratio	0.303	0.124	0.076	0.194	0.001	0.082
HCM Control Delay	9.6	9	7.8	9.5	7.4	8
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	1.3	0.4	0.2	0.7	0	0.3

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/04/2021

Intersection

Intersection Delay, s/veh11.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	59	8	23	21	4	1	146	22	1	293	54
Future Vol, veh/h	106	59	8	23	21	4	1	146	22	1	293	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	112	62	8	24	22	4	1	154	23	1	308	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	10.4	9.5	10.9	12
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	100%	0%	100%	0%	0%	0%
Vol Thru, %	86%	0%	88%	0%	84%	100%	0%
Vol Right, %	13%	0%	12%	0%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	169	106	67	23	25	294	54
LT Vol	1	106	0	23	0	1	0
Through Vol	146	0	59	0	21	293	0
RT Vol	22	0	8	0	4	0	54
Lane Flow Rate	178	112	71	24	26	309	57
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.28	0.203	0.117	0.046	0.045	0.462	0.074
Departure Headway (Hd)	5.665	6.555	5.963	6.799	6.177	5.374	4.667
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	639	550	604	529	582	662	756
Service Time	3.665	4.267	3.675	4.515	3.893	3.173	2.466
HCM Lane V/C Ratio	0.279	0.204	0.118	0.045	0.045	0.467	0.075
HCM Control Delay	10.9	10.9	9.5	9.8	9.2	12.8	7.8
HCM Lane LOS	B	B	A	A	A	B	A
HCM 95th-tile Q	1.1	0.8	0.4	0.1	0.1	2.4	0.2

HCM 6th TWSC
3: Topaz St/Topaz Rd & Eucalyptus St

02/04/2021

Intersection												
Int Delay, s/veh	15.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	136	102	3	15	28	28	9	15	11	90	166	89
Future Vol, veh/h	136	102	3	15	28	28	9	15	11	90	166	89
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	143	107	3	16	29	29	9	16	12	95	175	94
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	58	0	0	110	0	0	605	485	109	485	472	44
Stage 1	-	-	-	-	-	-	395	395	-	76	76	-
Stage 2	-	-	-	-	-	-	210	90	-	409	396	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1559	-	-	1493	-	-	413	485	950	496	493	1032
Stage 1	-	-	-	-	-	-	634	608	-	938	836	-
Stage 2	-	-	-	-	-	-	797	824	-	623	607	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1493	-	-	241	436	950	439	443	1032
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	436	-	439	443	-
Stage 1	-	-	-	-	-	-	576	552	-	852	827	-
Stage 2	-	-	-	-	-	-	565	815	-	543	551	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.3			1.6			14.4			26.6		
HCM LOS							B			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	420	1559	-	-	1493	-	-	518				
HCM Lane V/C Ratio	0.088	0.092	-	-	0.011	-	-	0.701				
HCM Control Delay (s)	14.4	7.5	-	-	7.4	-	-	26.6				
HCM Lane LOS	B	A	-	-	A	-	-	D				
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0	-	-	5.5				

HCM 6th TWSC
4: Topaz St & Street A

02/04/2021

Intersection

Int Delay, s/veh 1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	17	0	7	178
Future Vol, veh/h	0	19	17	0	7	178
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	20	18	0	7	187

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	219	18	0
Stage 1	18	-	-
Stage 2	201	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	774	1066	-
Stage 1	1010	-	-
Stage 2	838	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	770	1066	-
Mov Cap-2 Maneuver	770	-	-
Stage 1	1010	-	-
Stage 2	834	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1066	1612
HCM Lane V/C Ratio	-	-	0.019	0.005
HCM Control Delay (s)	-	-	8.4	7.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
5: Street B & Eucalyptus St

02/04/2021

Intersection

Int Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	196	7	0	52	19	0
Future Vol, veh/h	196	7	0	52	19	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	206	7	0	55	20	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	213
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1369
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1369
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	728	-	-	1369	-
HCM Lane V/C Ratio	0.027	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th AWSC
1: Mesa Linda St & Eucalyptus St

02/04/2021

Intersection

Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰↱			↰↱	
Traffic Vol, veh/h	95	163	110	92	89	30	77	66	59	4	66	25
Future Vol, veh/h	95	163	110	92	89	30	77	66	59	4	66	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	99	170	115	96	93	31	80	69	61	4	69	26
Number of Lanes	0	1	1	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.9	11.3	11.3	9.9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	38%	37%	0%	51%	0%	4%
Vol Thru, %	33%	63%	0%	49%	0%	69%
Vol Right, %	29%	0%	100%	0%	100%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	258	110	181	30	95
LT Vol	77	95	0	92	0	4
Through Vol	66	163	0	89	0	66
RT Vol	59	0	110	0	30	25
Lane Flow Rate	210	269	115	189	31	99
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.325	0.441	0.159	0.323	0.045	0.158
Departure Headway (Hd)	5.555	5.902	5.007	6.168	5.2	5.734
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	646	610	716	583	688	624
Service Time	3.598	3.638	2.742	3.91	2.941	3.783
HCM Lane V/C Ratio	0.325	0.441	0.161	0.324	0.045	0.159
HCM Control Delay	11.3	13.2	8.7	11.8	8.2	9.9
HCM Lane LOS	B	B	A	B	A	A
HCM 95th-tile Q	1.4	2.2	0.6	1.4	0.1	0.6

HCM 6th AWSC
2: Topaz Rd & Sycamore St

02/04/2021

Intersection

Intersection Delay, s/veh16.6

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	59	6	47	53	6	4	379	53	12	192	126
Future Vol, veh/h	78	59	6	47	53	6	4	379	53	12	192	126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	82	62	6	49	56	6	4	399	56	13	202	133
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	2	2	2
HCM Control Delay	11.3	10.9	23.9	11.2
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	1%	100%	0%	100%	0%	6%	0%
Vol Thru, %	87%	0%	91%	0%	90%	94%	0%
Vol Right, %	12%	0%	9%	0%	10%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	436	78	65	47	59	204	126
LT Vol	4	78	0	47	0	12	0
Through Vol	379	0	59	0	53	192	0
RT Vol	53	0	6	0	6	0	126
Lane Flow Rate	459	82	68	49	62	215	133
Geometry Grp	6	7	7	7	7	7	7
Degree of Util (X)	0.743	0.17	0.131	0.104	0.12	0.362	0.197
Departure Headway (Hd)	5.83	7.458	6.88	7.559	6.973	6.075	5.335
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	620	479	519	472	512	591	670
Service Time	3.878	5.228	4.65	5.333	4.747	3.831	3.09
HCM Lane V/C Ratio	0.74	0.171	0.131	0.104	0.121	0.364	0.199
HCM Control Delay	23.9	11.8	10.7	11.2	10.7	12.3	9.4
HCM Lane LOS	C	B	B	B	B	B	A
HCM 95th-tile Q	6.5	0.6	0.4	0.3	0.4	1.6	0.7

HCM 6th TWSC

3: Topaz St/Topaz Rd & Eucalyptus St

02/04/2021

Intersection

Int Delay, s/veh 12.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	149	56	11	15	99	129	7	168	24	38	21	186
Future Vol, veh/h	149	56	11	15	99	129	7	168	24	38	21	186
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	85	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	157	59	12	16	104	136	7	177	25	40	22	196

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	71	0	0	692	651	65	684	589	172
Stage 1	-	-	-	-	-	-	379	379	-	204	204	-
Stage 2	-	-	-	-	-	-	313	272	-	480	385	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1339	-	-	1542	-	-	361	390	1005	365	423	877
Stage 1	-	-	-	-	-	-	647	618	-	803	737	-
Stage 2	-	-	-	-	-	-	702	688	-	571	614	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1339	-	-	1542	-	-	242	341	1005	192	370	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	341	-	192	370	-
Stage 1	-	-	-	-	-	-	571	546	-	709	730	-
Stage 2	-	-	-	-	-	-	523	681	-	332	542	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	5.5			0.5			27.3			18.3		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1339	-	-	1542	-	-	525
HCM Lane V/C Ratio	0.574	0.117	-	-	0.01	-	-	0.491
HCM Control Delay (s)	27.3	8	-	-	7.4	-	-	18.3
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3.4	0.4	-	-	0	-	-	2.7

HCM 6th TWSC
4: Topaz St & Street A

02/04/2021

Intersection

Int Delay, s/veh 1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	187	0	21	25
Future Vol, veh/h	0	13	187	0	21	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	14	197	0	22	26

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	267	197	0
Stage 1	197	-	-
Stage 2	70	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	727	849	-
Stage 1	841	-	-
Stage 2	958	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	715	849	-
Mov Cap-2 Maneuver	715	-	-
Stage 1	841	-	-
Stage 2	943	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	849	1388
HCM Lane V/C Ratio	-	-	0.016	0.016
HCM Control Delay (s)	-	-	9.3	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 6th TWSC
5: Street B & Eucalyptus St

02/04/2021

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	96	21	0	230	13	0
Future Vol, veh/h	96	21	0	230	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	101	22	0	242	14	0

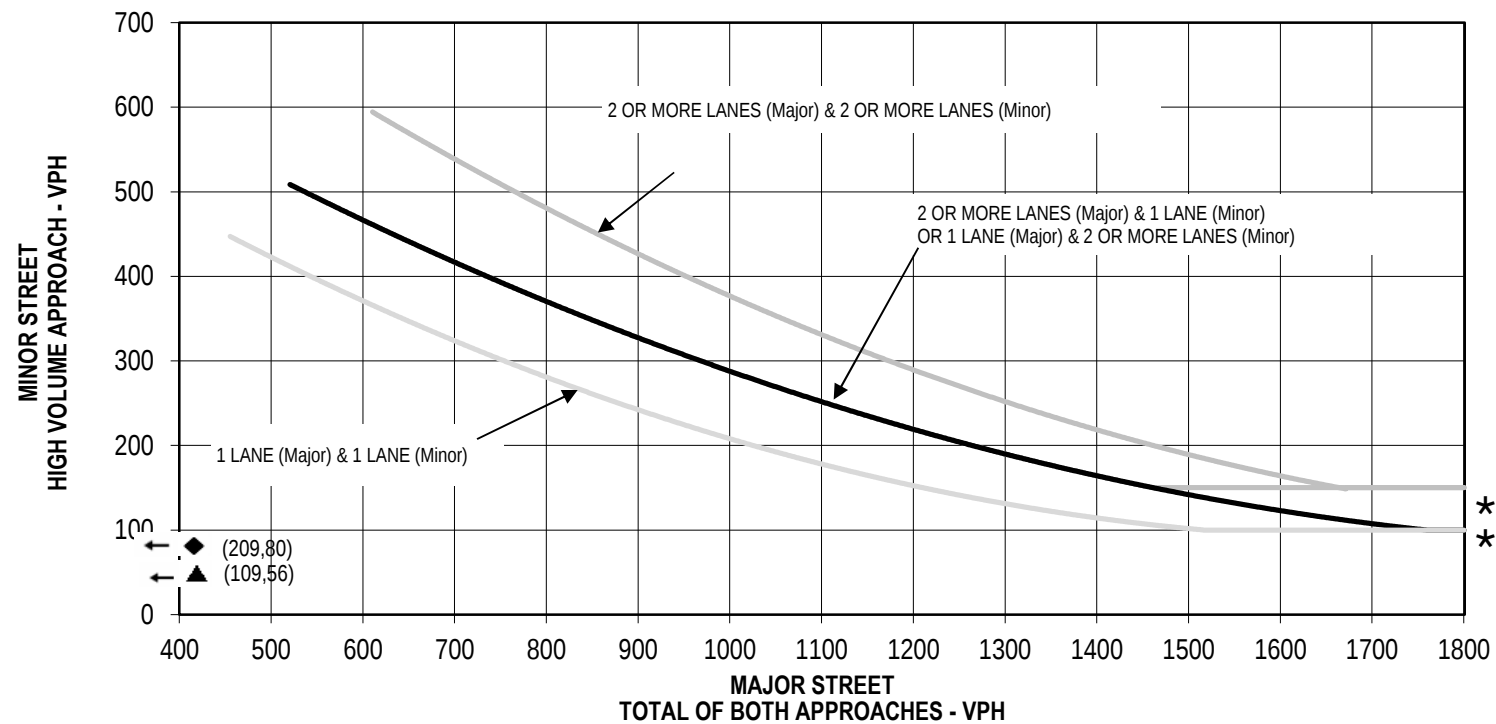
Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	123
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	1477
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1477
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	648	-	-	1477	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	10.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX D: SIGNAL WARRANTS

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

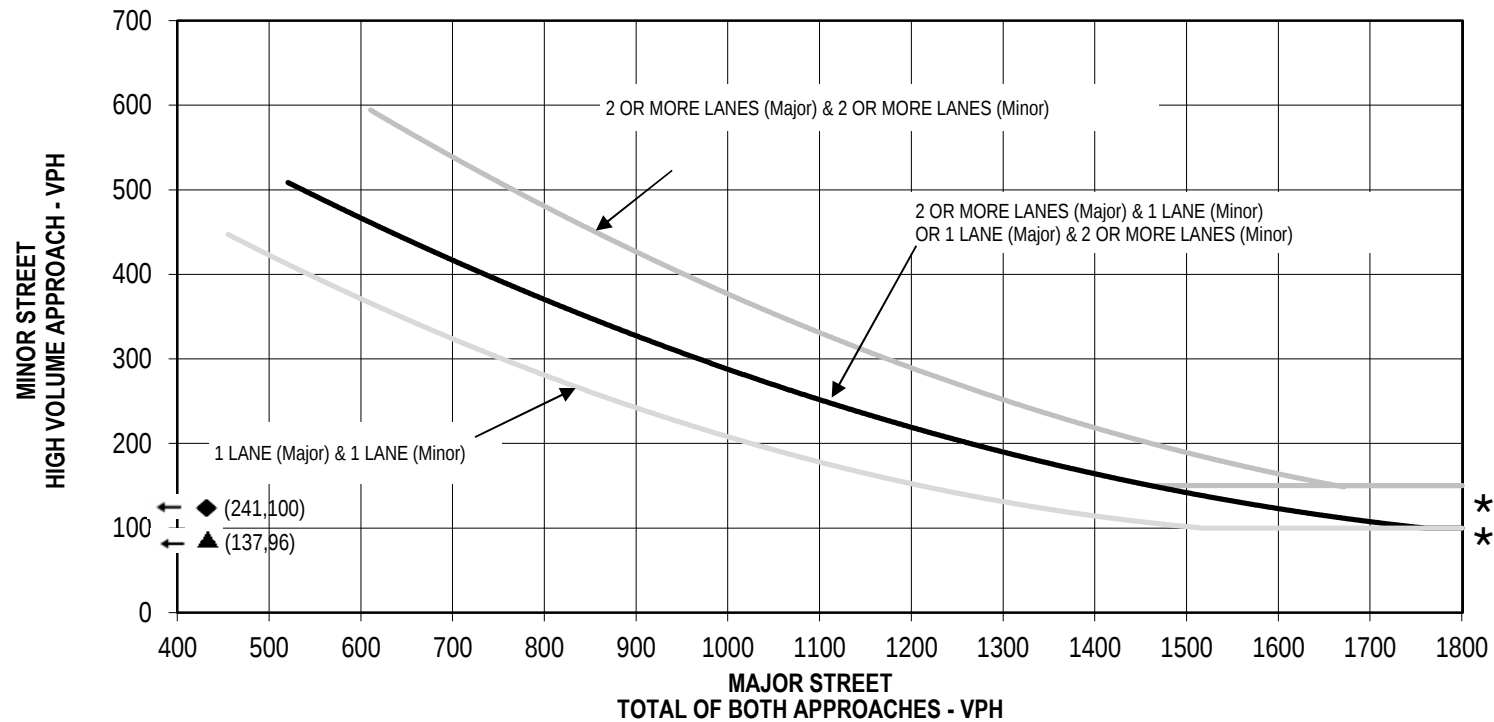
FIGURE D - 1

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Mesa Linda St/Eucalyptus St
Existing Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

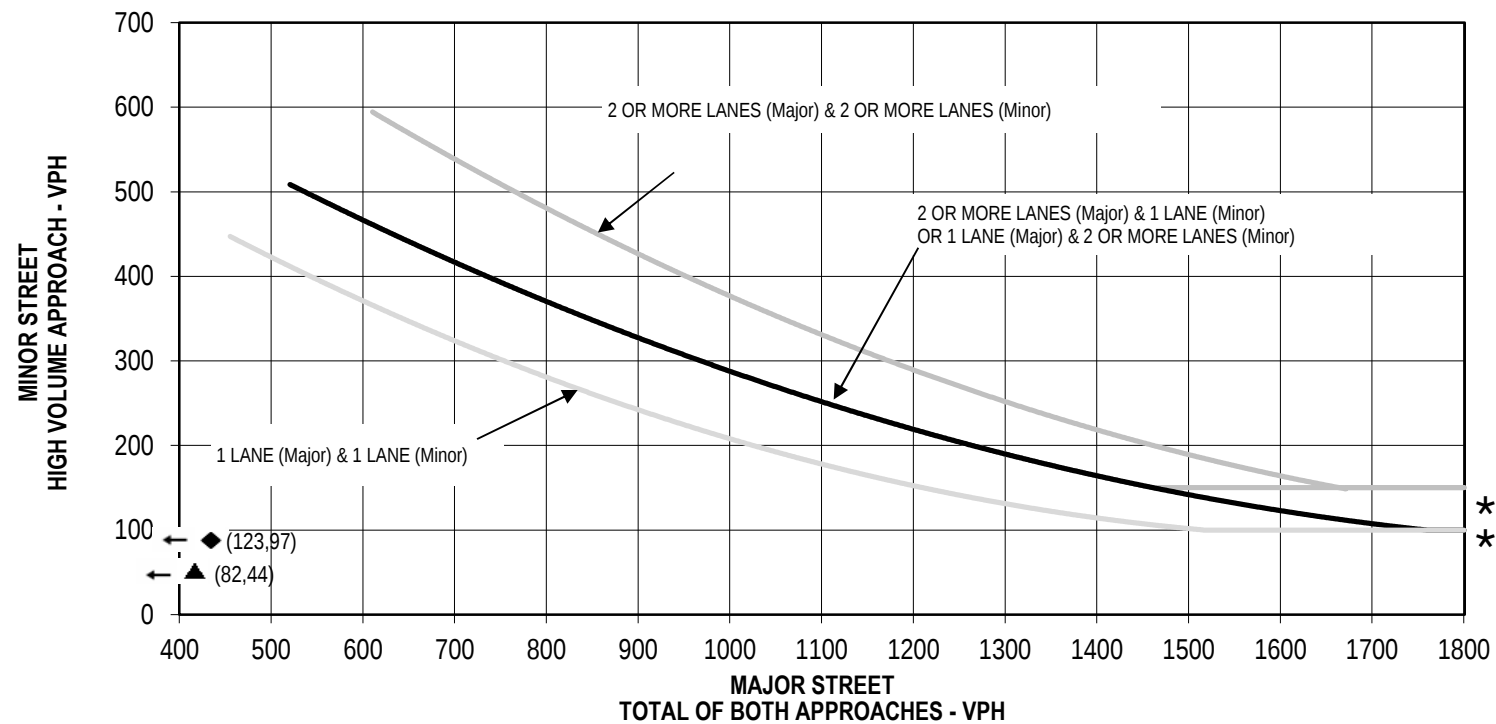
FIGURE D - 2

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Sycamore St
Existing Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

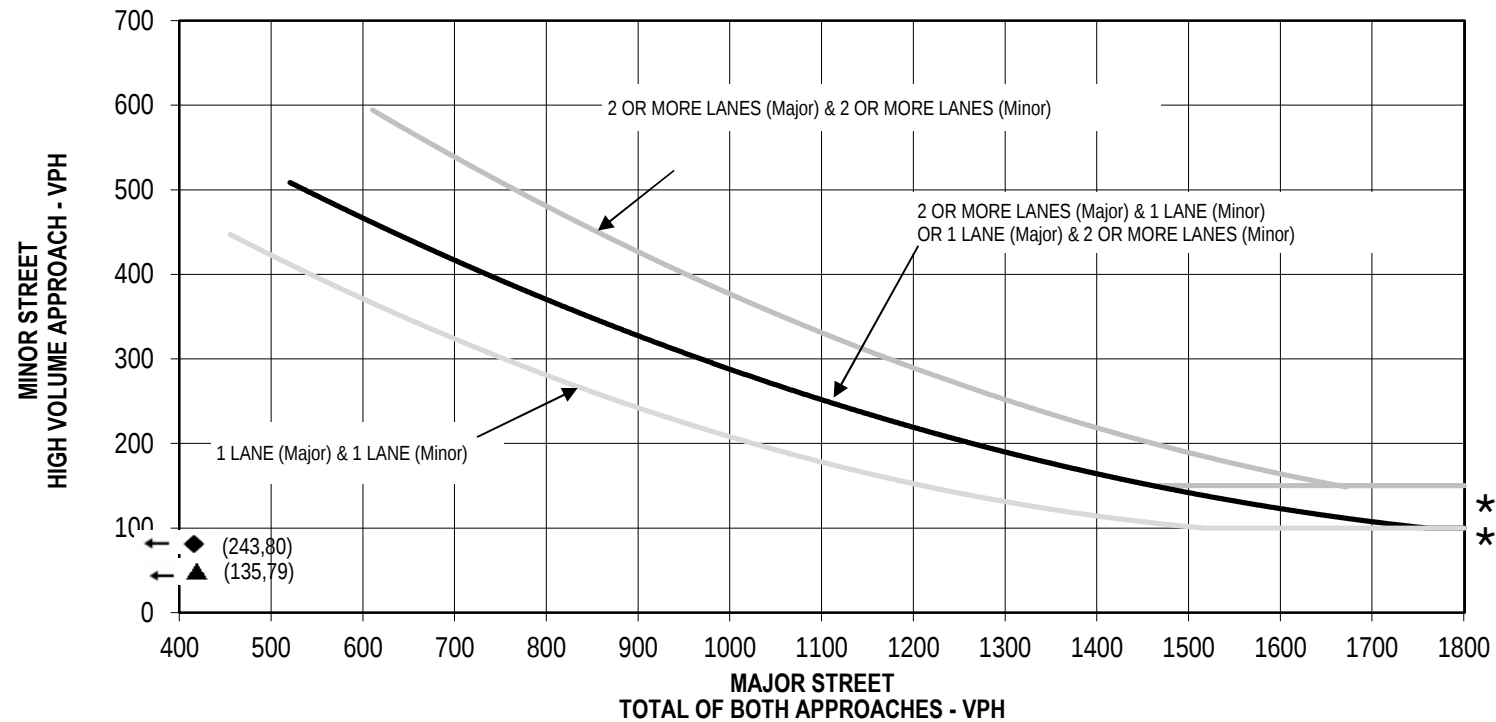
FIGURE D - 3

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Eucalytpus St
Existing Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

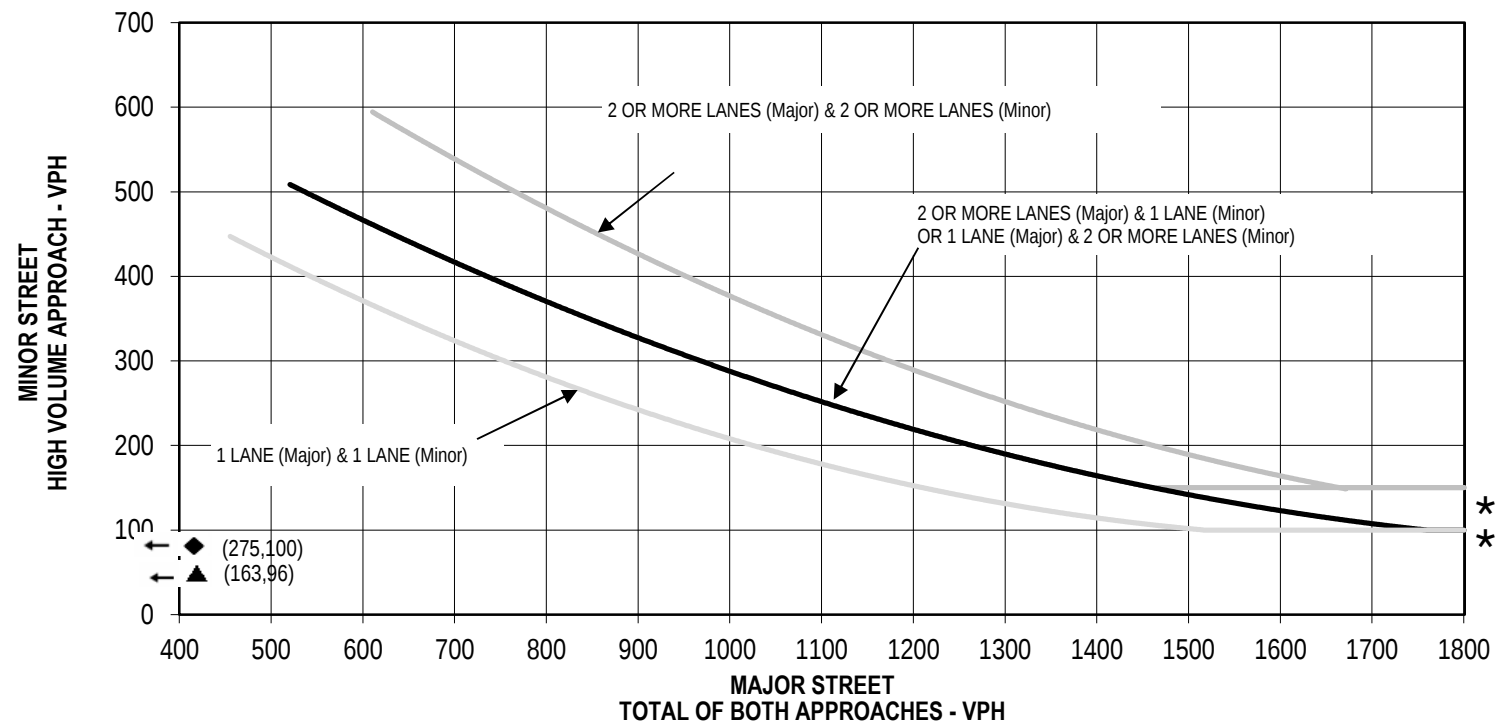
FIGURE D - 4

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Mesa Linda St/Eucalyptus St
Existing With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

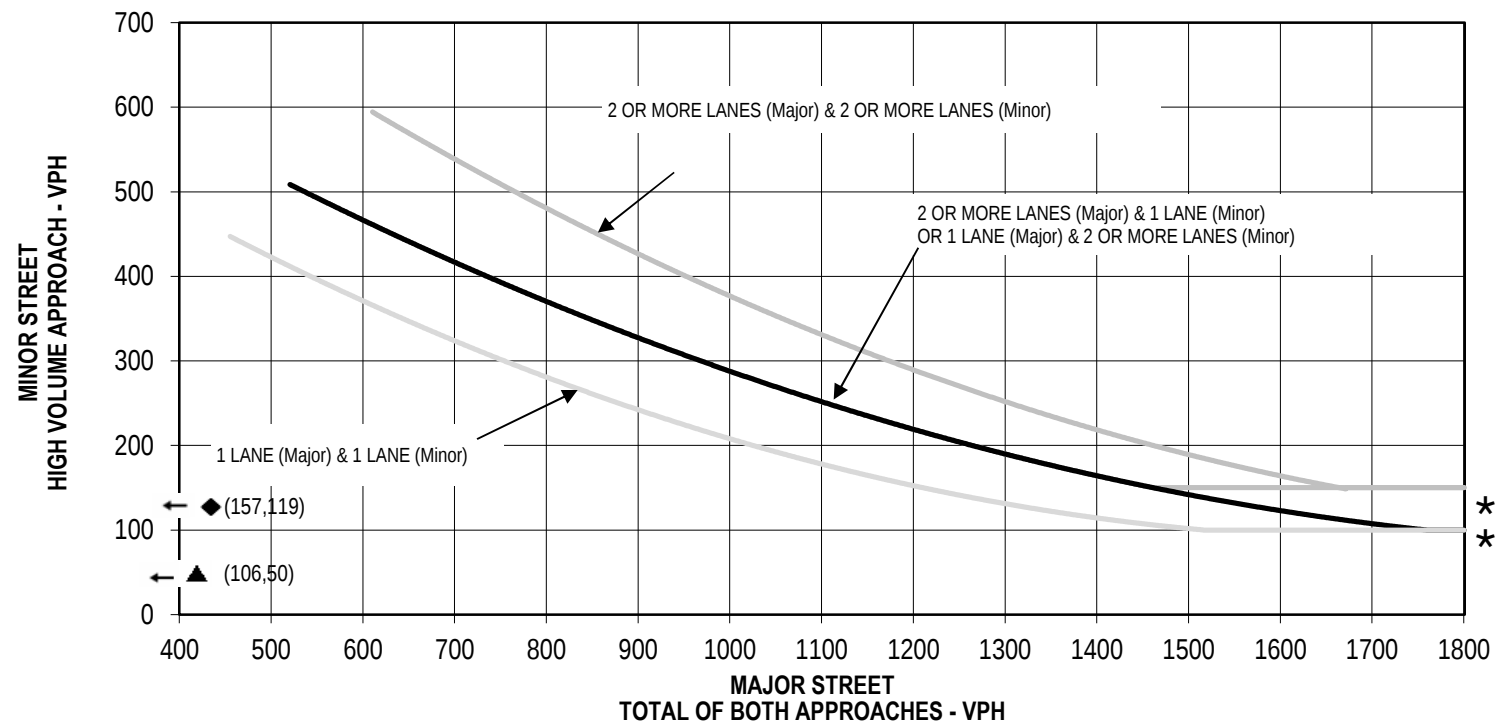
FIGURE D - 5

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Sycamore St
Existing With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

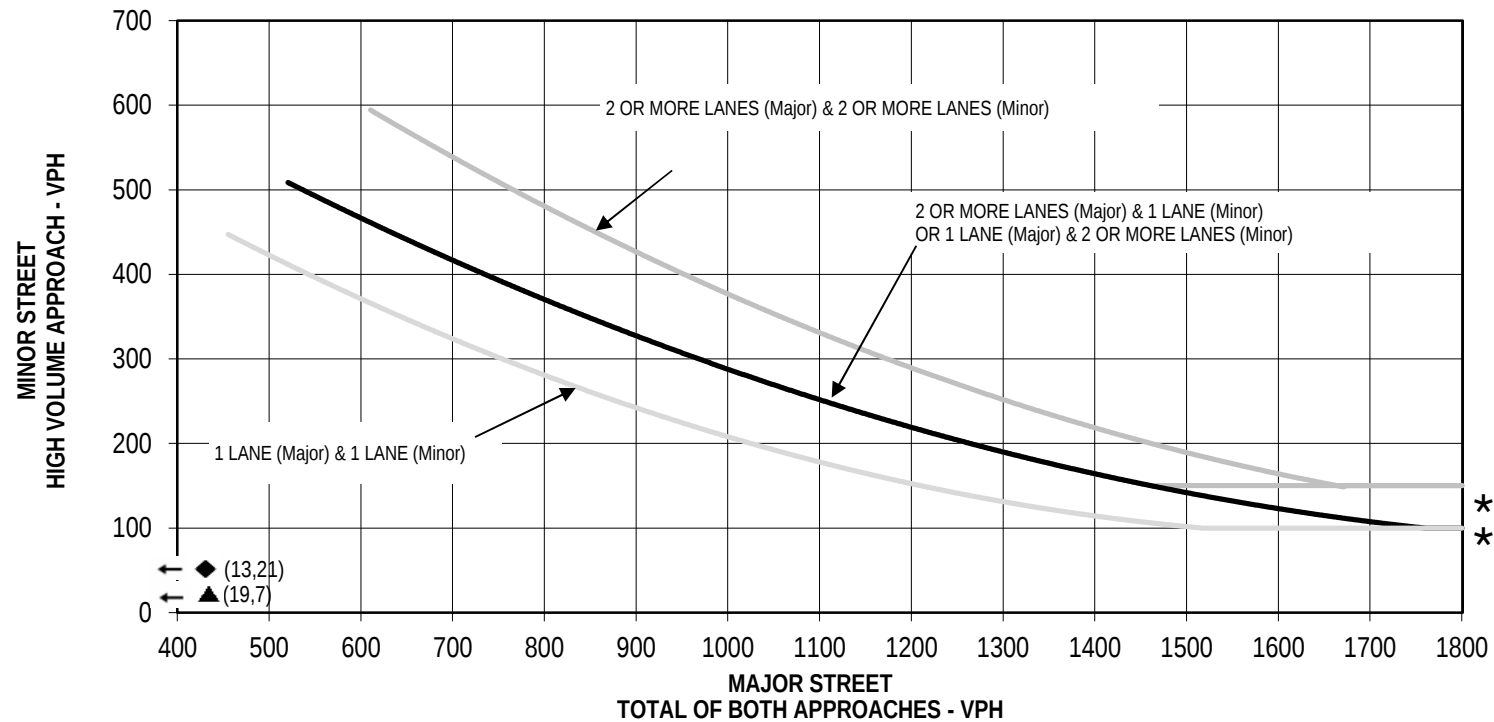
FIGURE D - 6

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Eucalytpus St
Existing With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

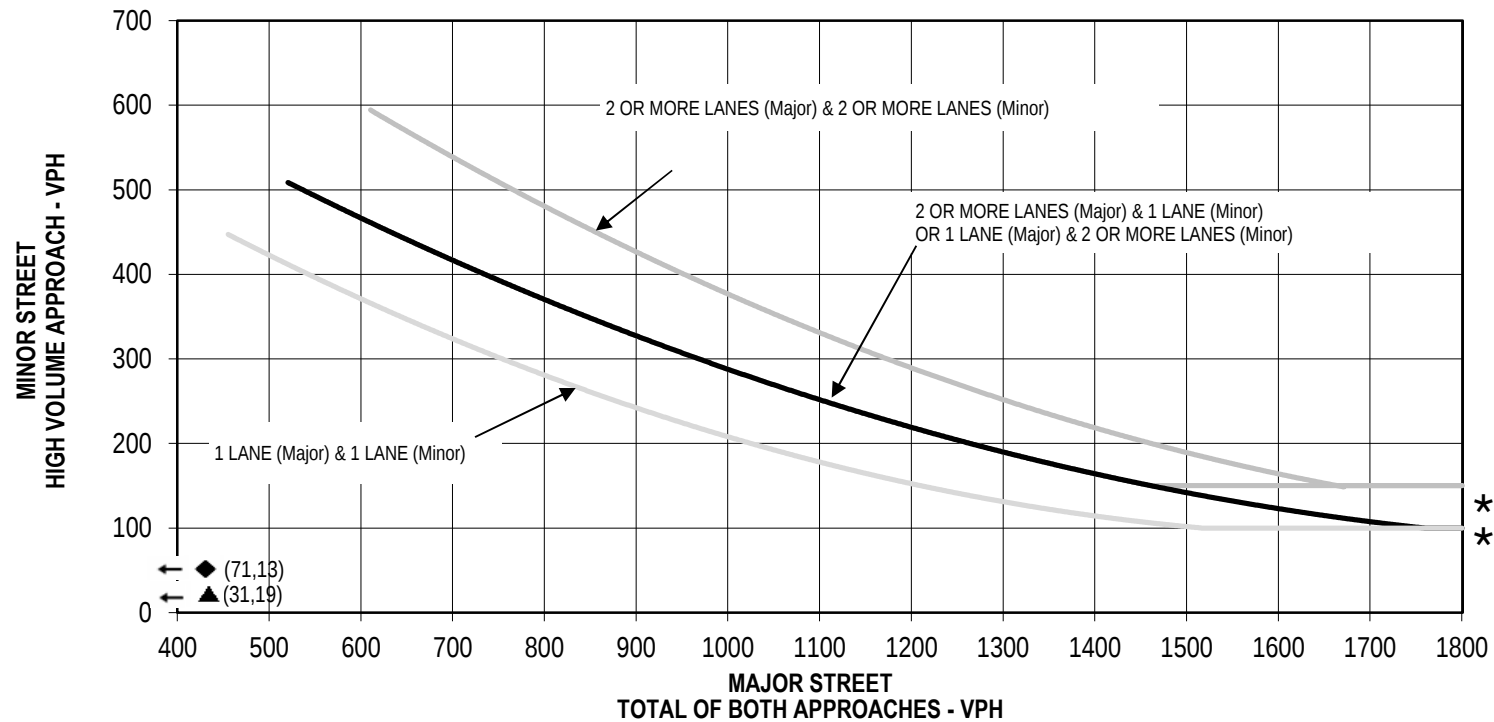
FIGURE D - 7

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Street A
Existing With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

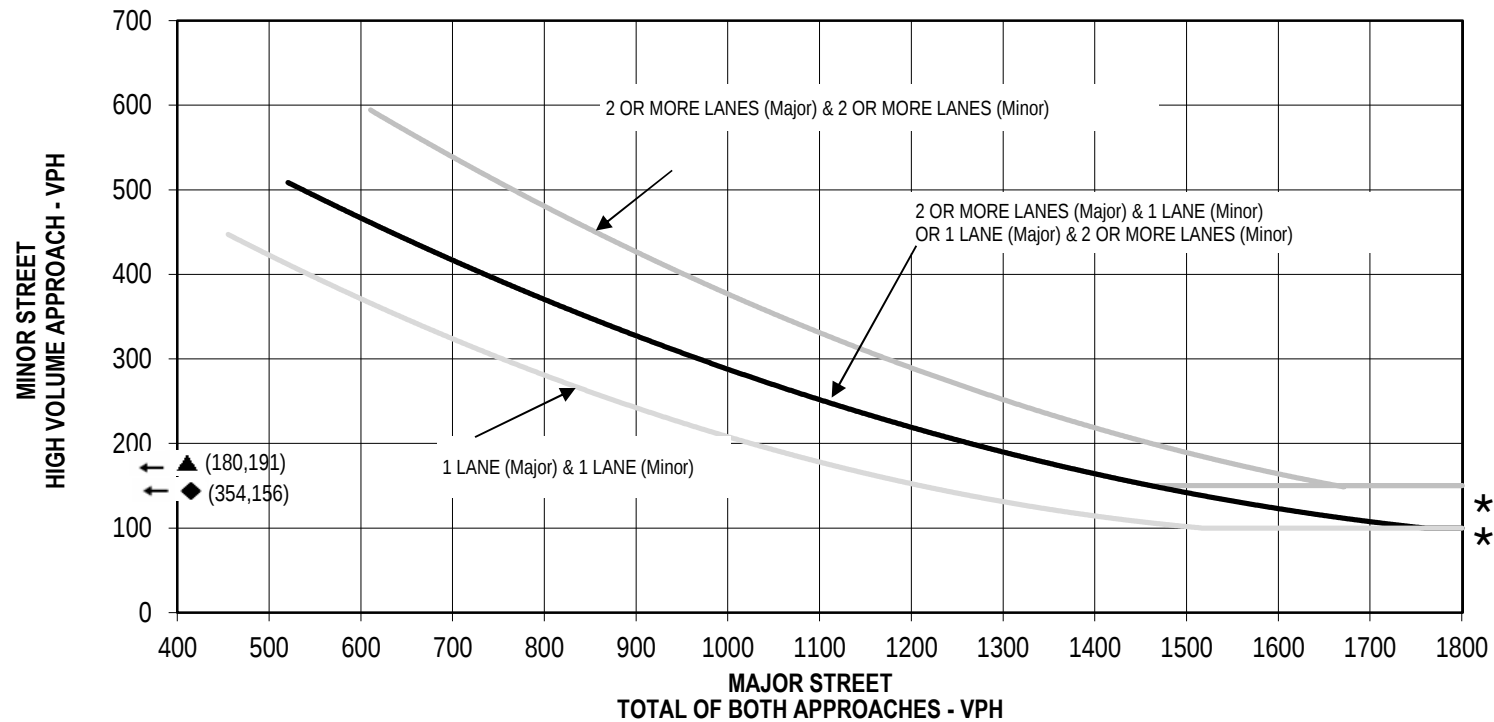
FIGURE D - 8

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Street B/Eucalyptus St
Existing With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

FIGURE D - 9

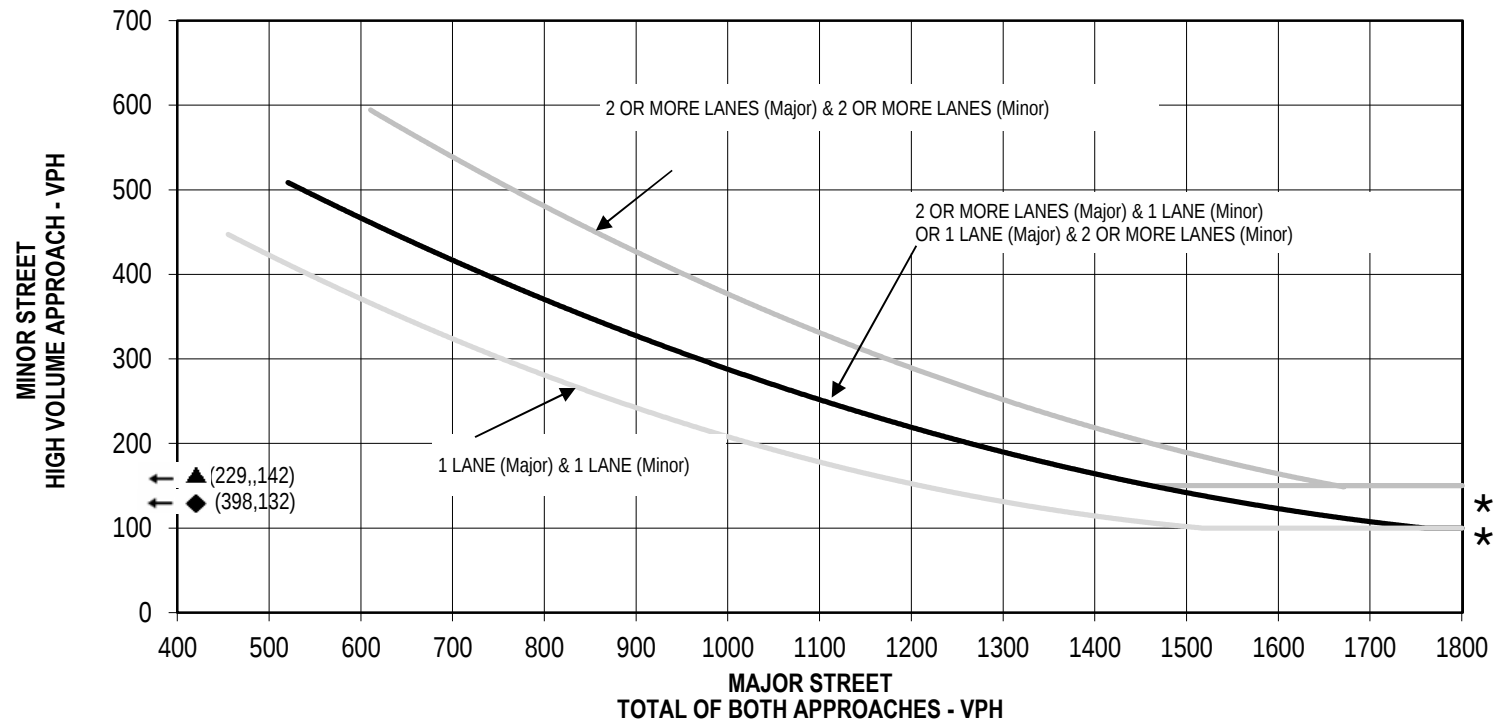
▲ AM Peak Hour

◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Mesa Linda St/Eucalyptus St
Opening Year Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

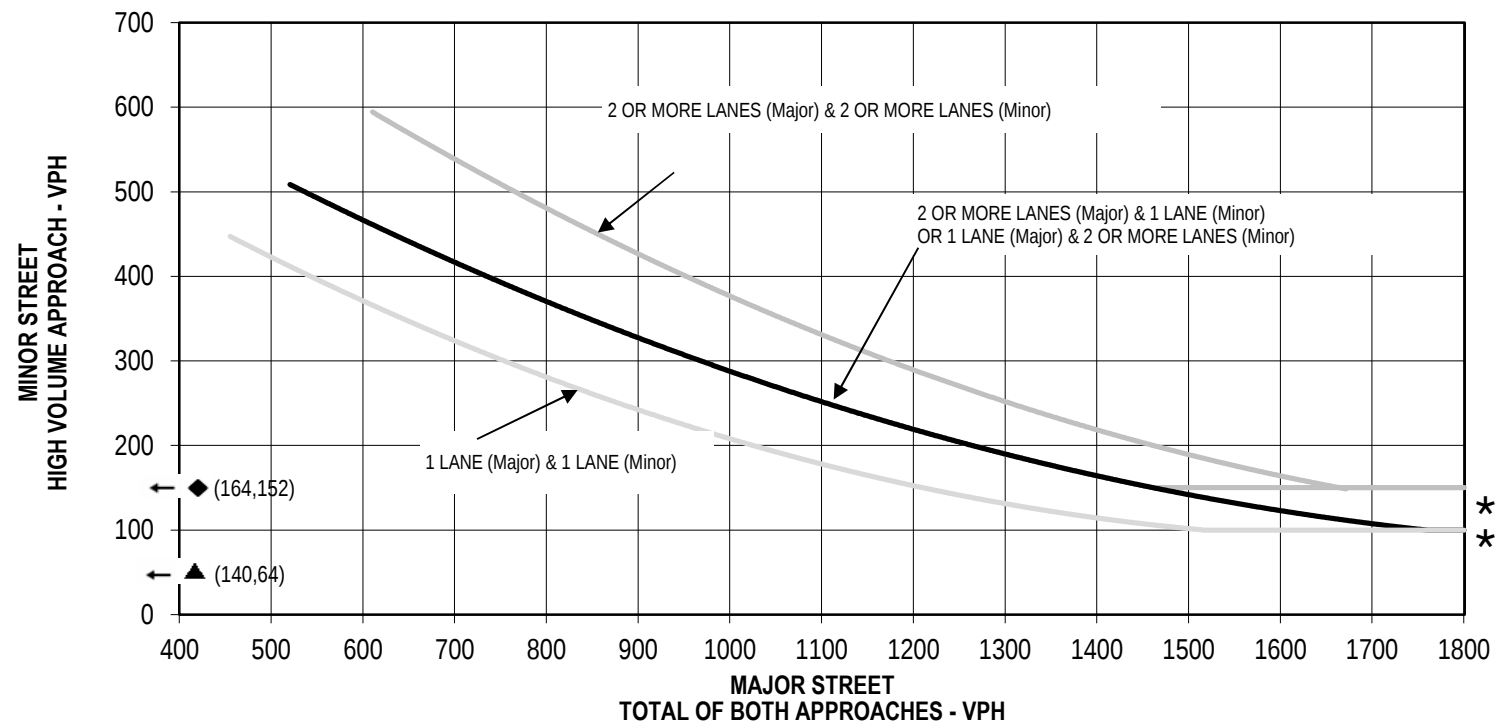
FIGURE D - 10

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Sycamore St
Opening Year Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

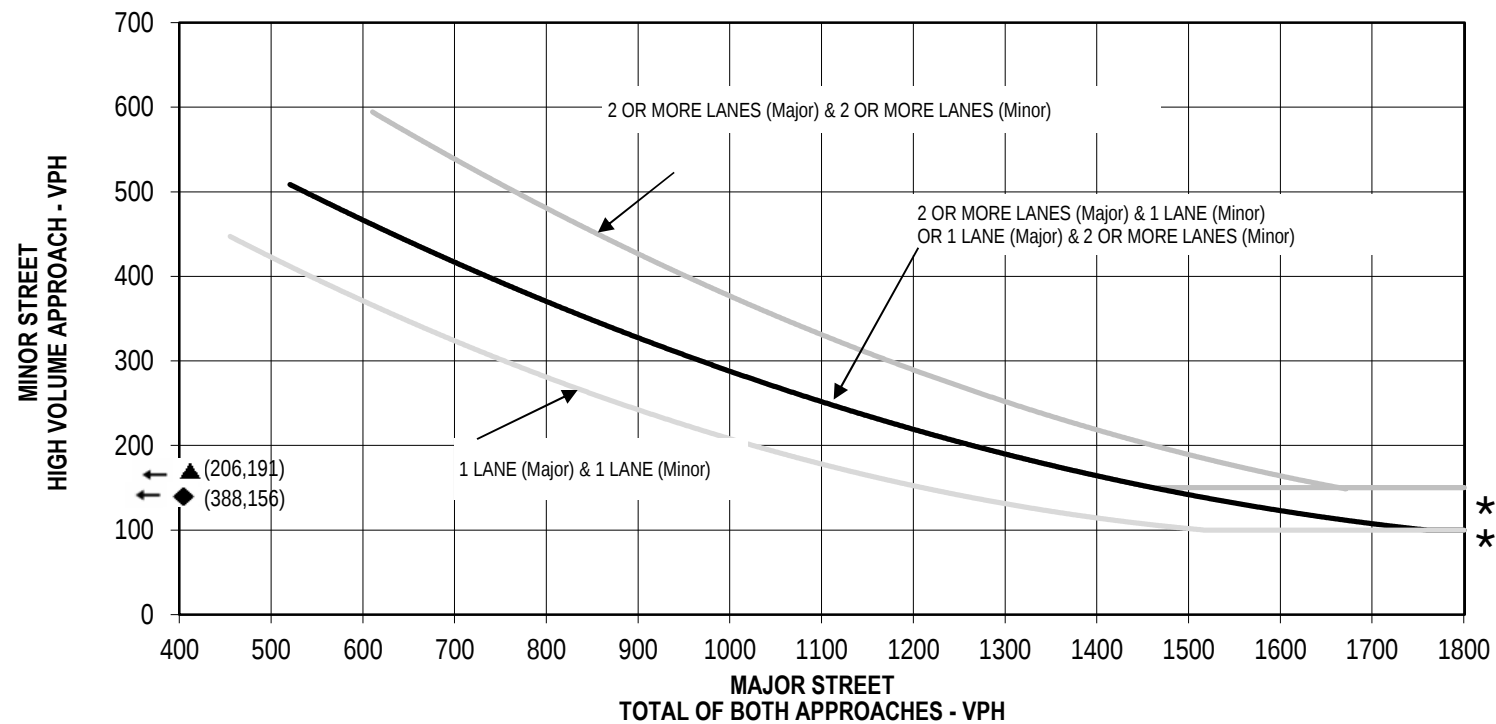
FIGURE D - 11

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Eucalytpus St
Opening Year Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

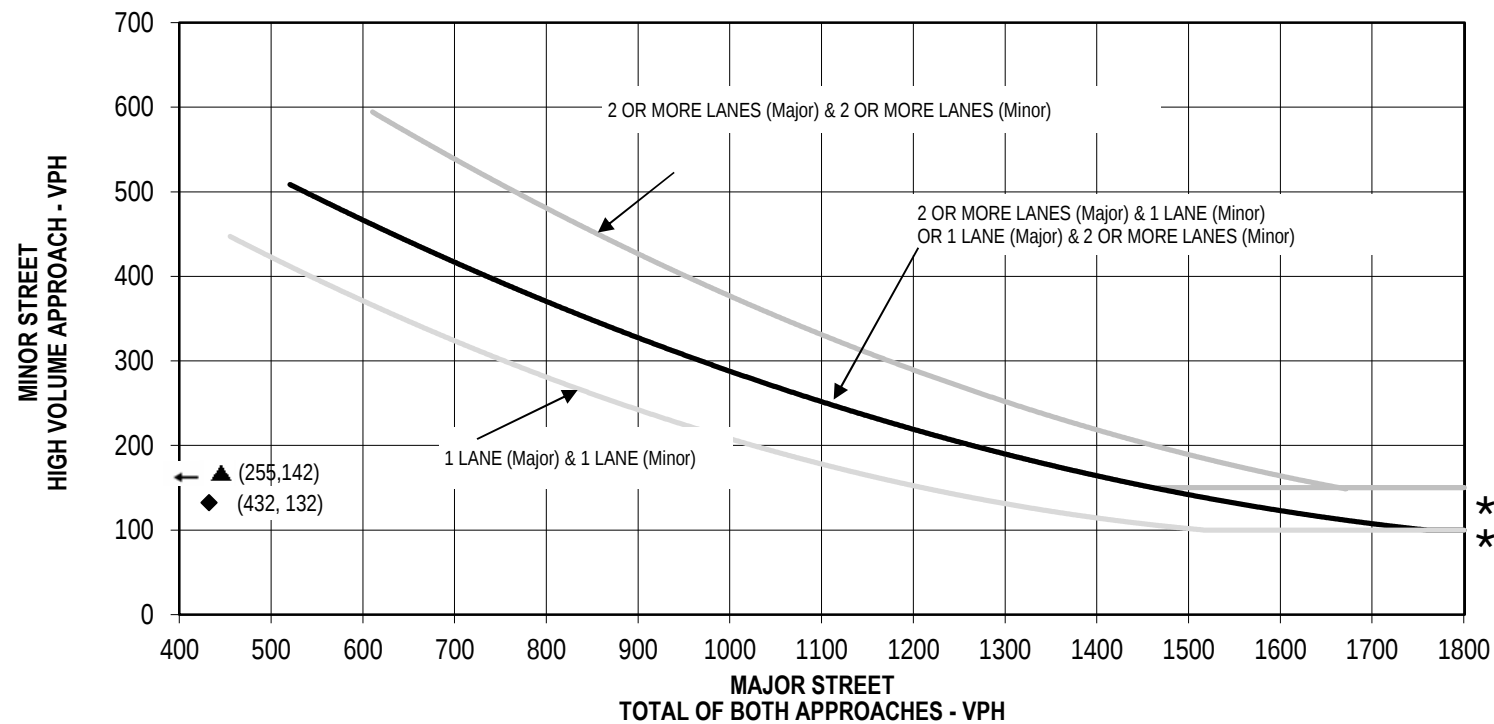
FIGURE D - 12

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Mesa Linda St/Eucalyptus St
Opening Year With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

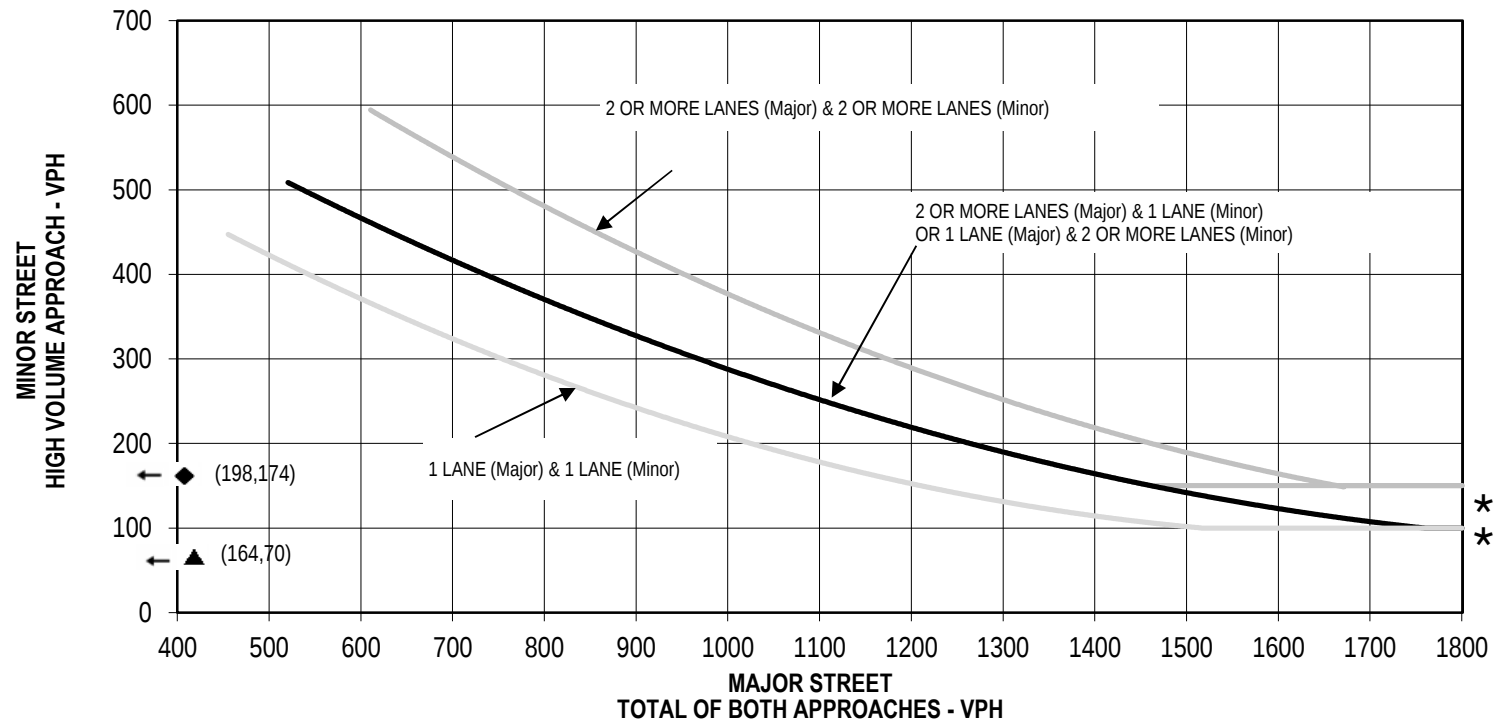
FIGURE D - 13

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Sycamore St
Opening Year With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

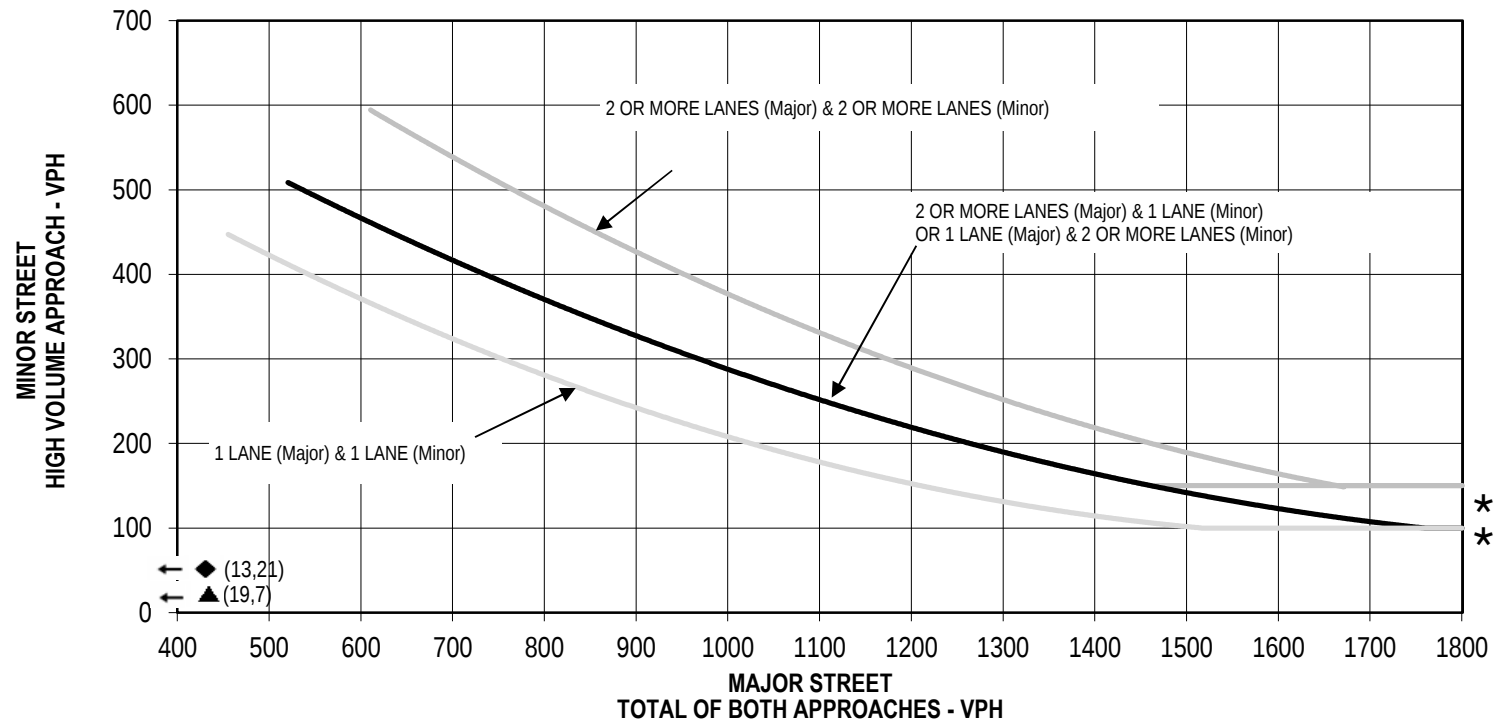
FIGURE D - 14

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Eucalytpus St
Opening Year With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

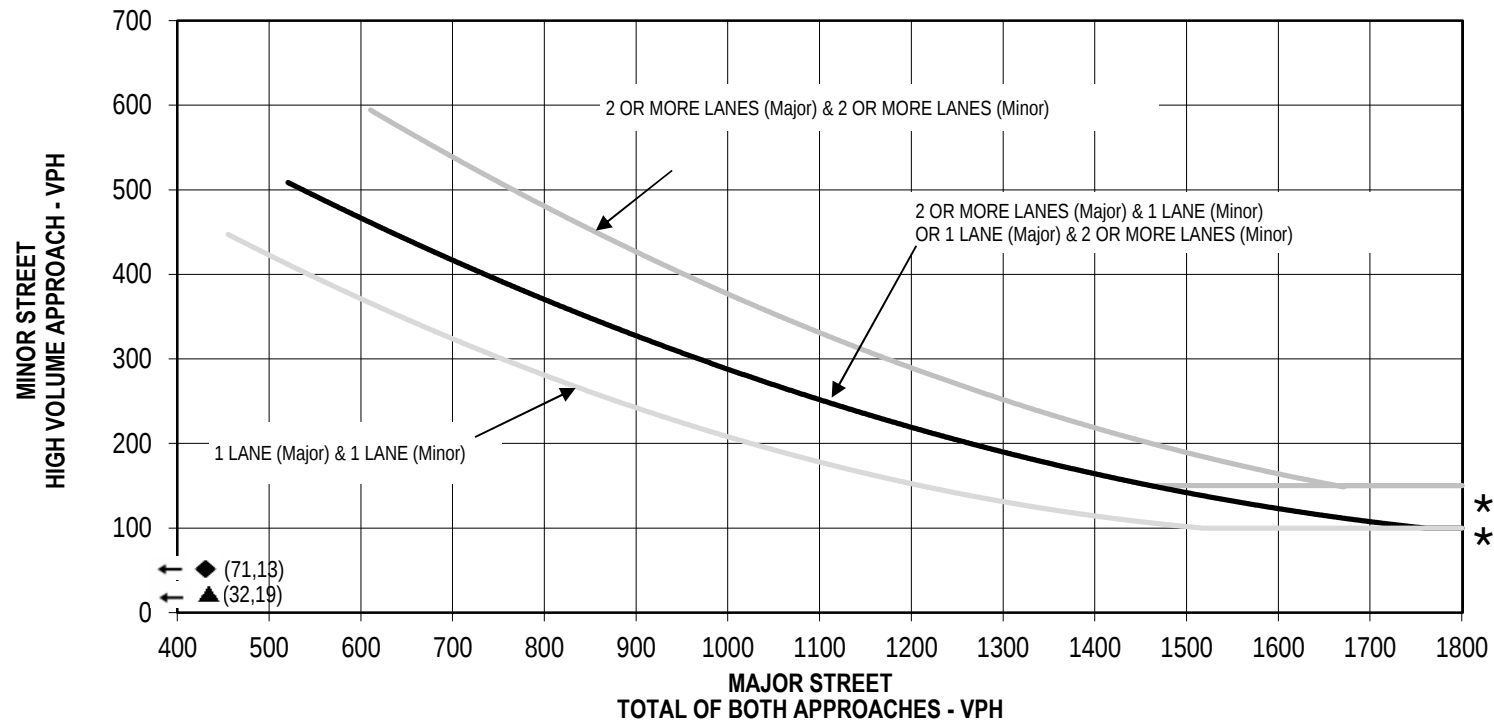
FIGURE D - 15

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Street A
Opening Year With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

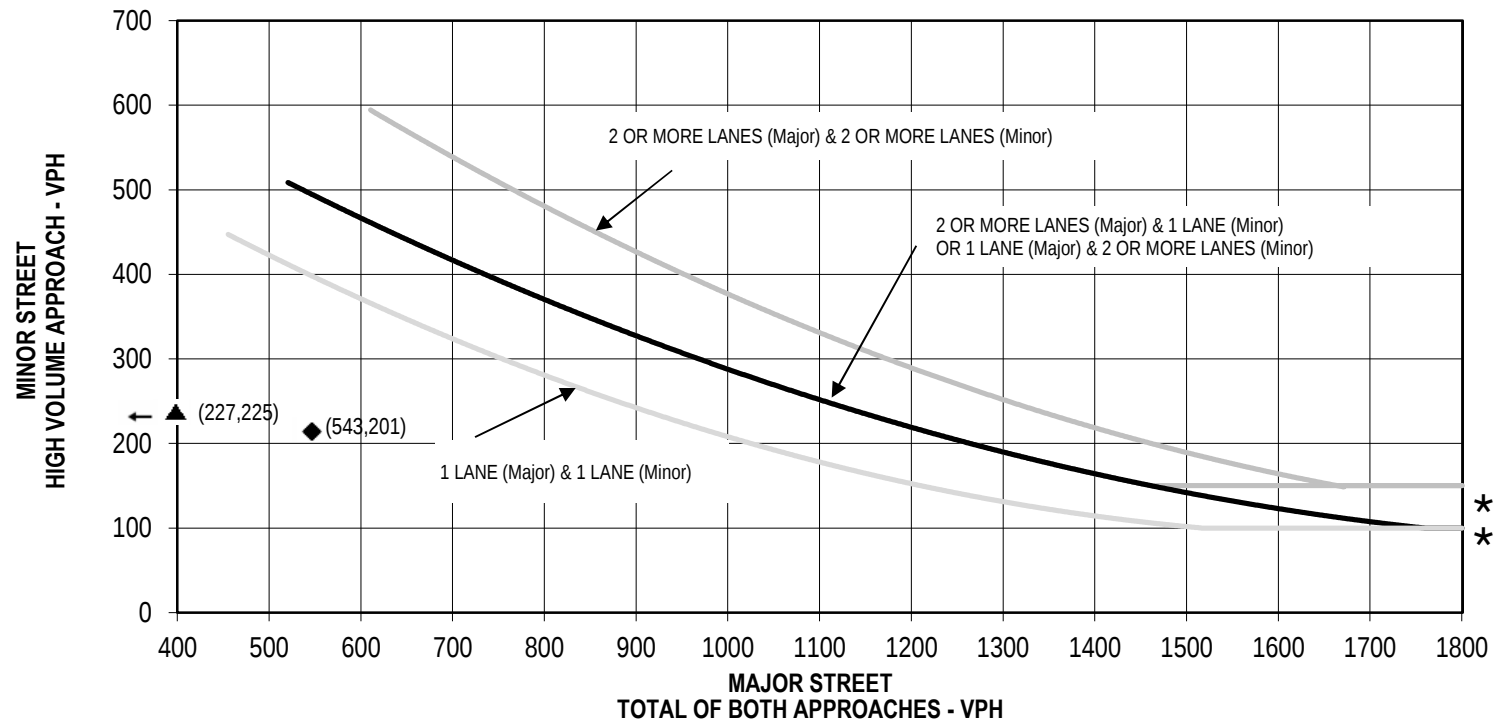
FIGURE D - 16

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Street B/Eucalyptus St
Opening Year With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

FIGURE D - 17

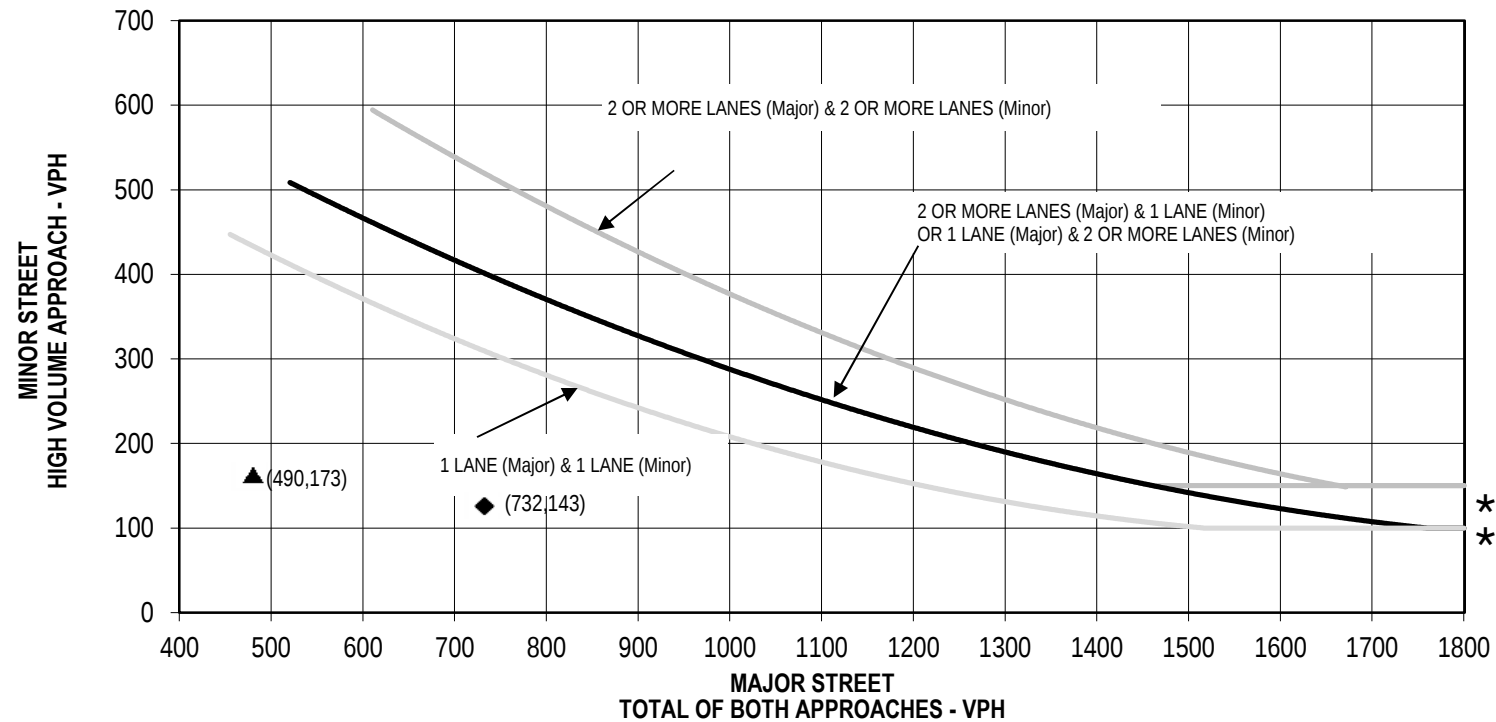
▲ AM Peak Hour

◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Mesa Linda St/Eucalyptus St
Year 2031 Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

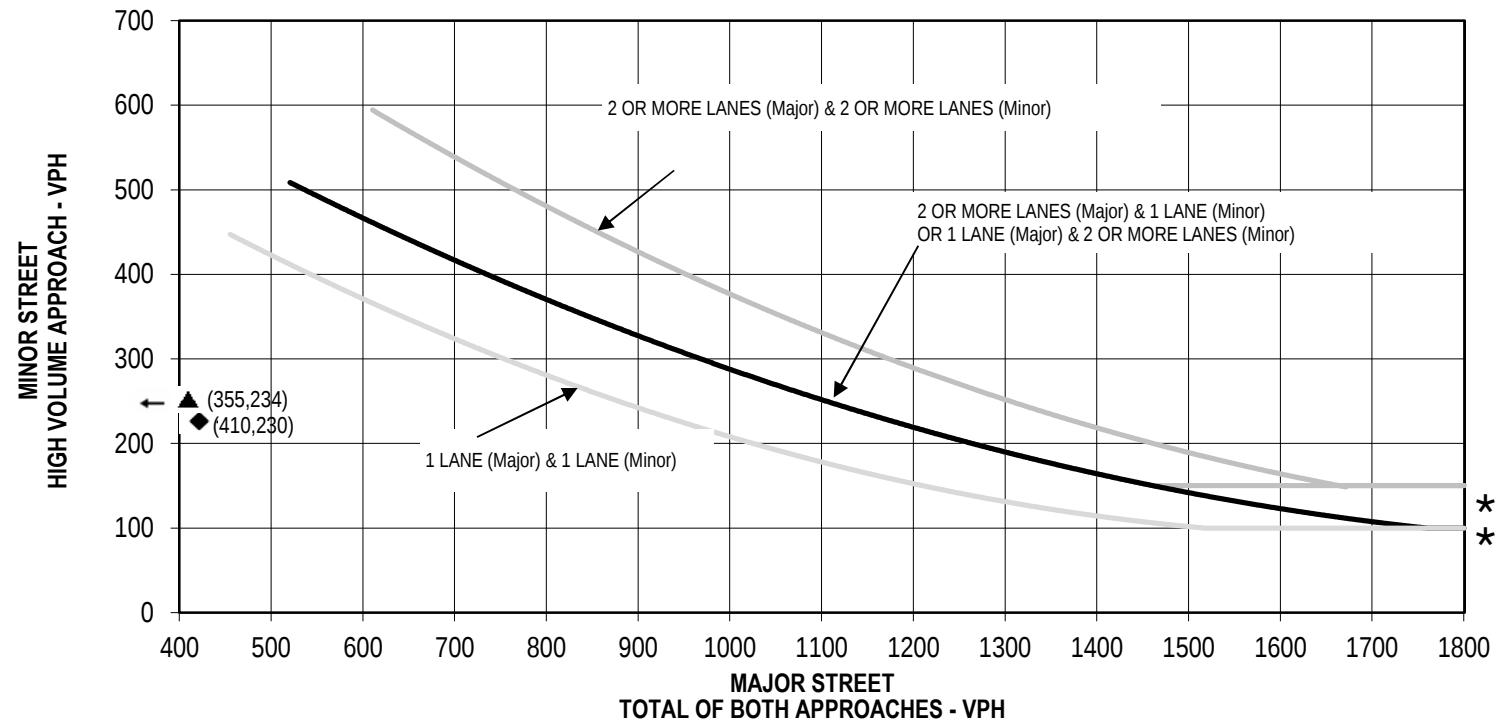
FIGURE D - 18

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Sycamore St
Year 2031 Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

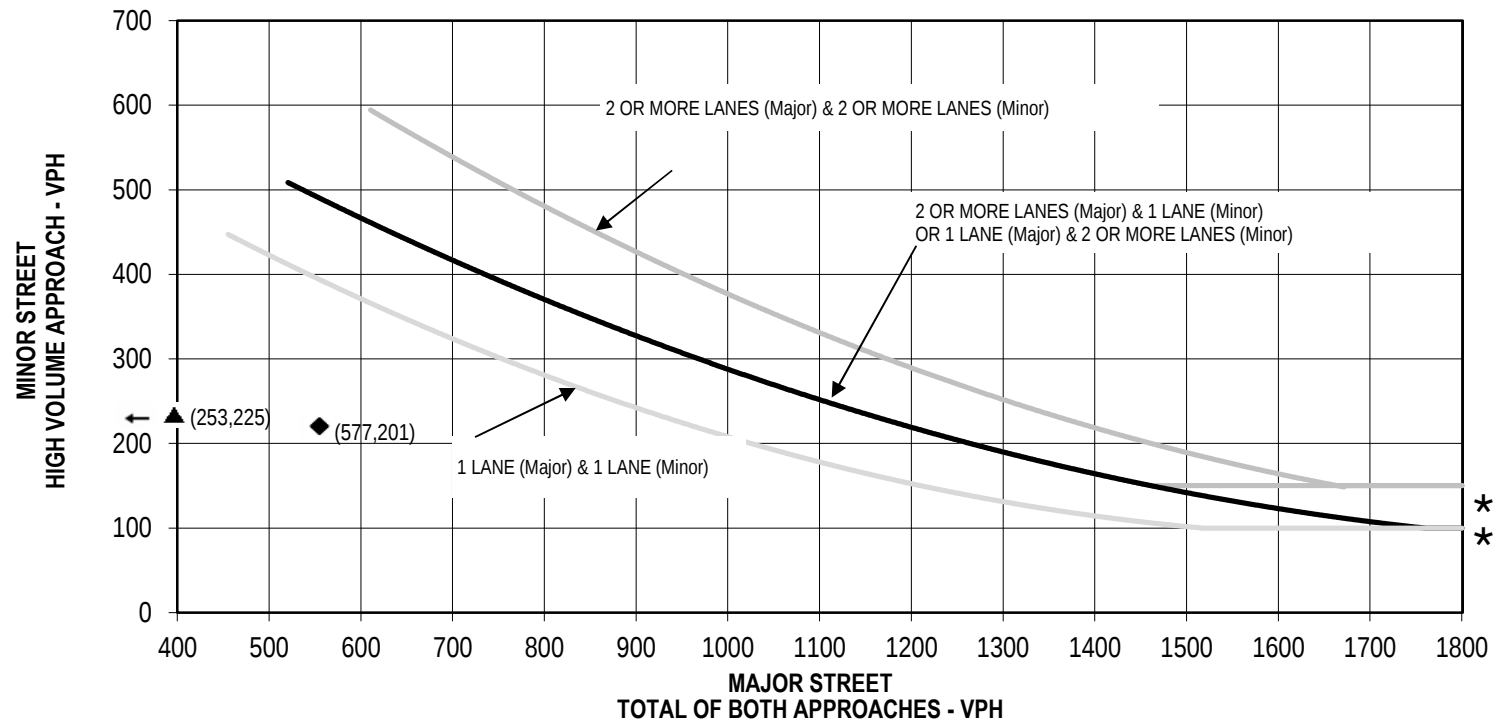
FIGURE D - 19

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Eucalyptus St
Year 2031 Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

FIGURE D - 20

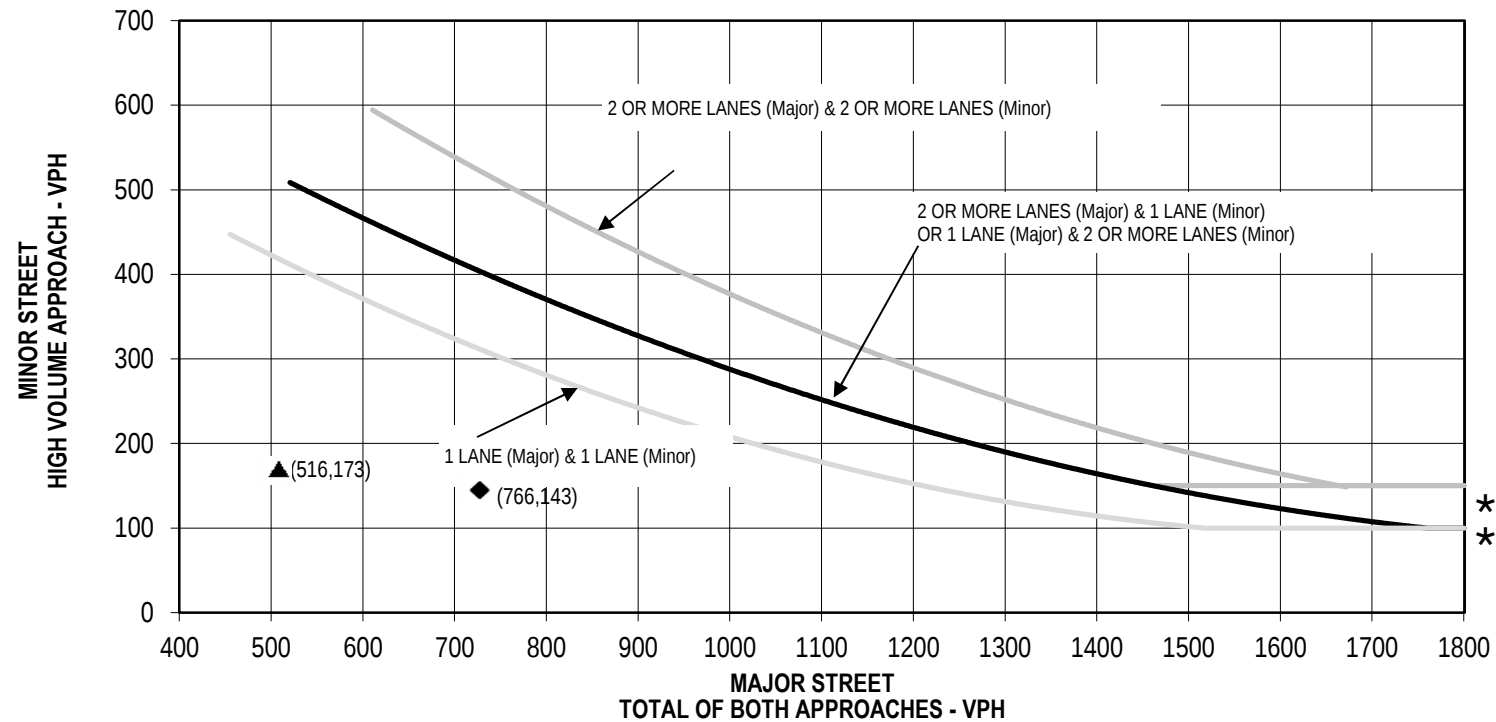
▲ AM Peak Hour

◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Mesa Linda St/Eucalyptus St
Year 2031 With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

FIGURE D - 21

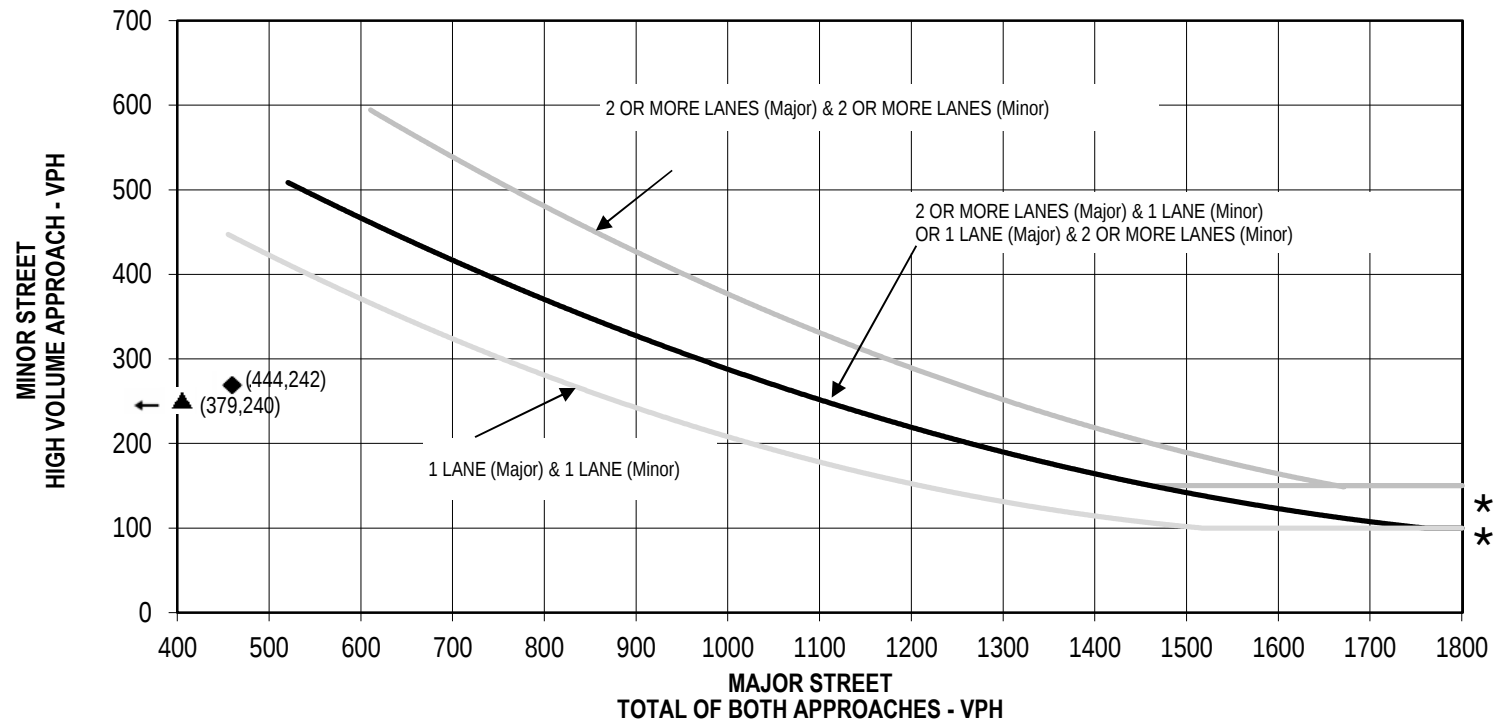
▲ AM Peak Hour

◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Sycamore St
Year 2031 With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

FIGURE D - 22

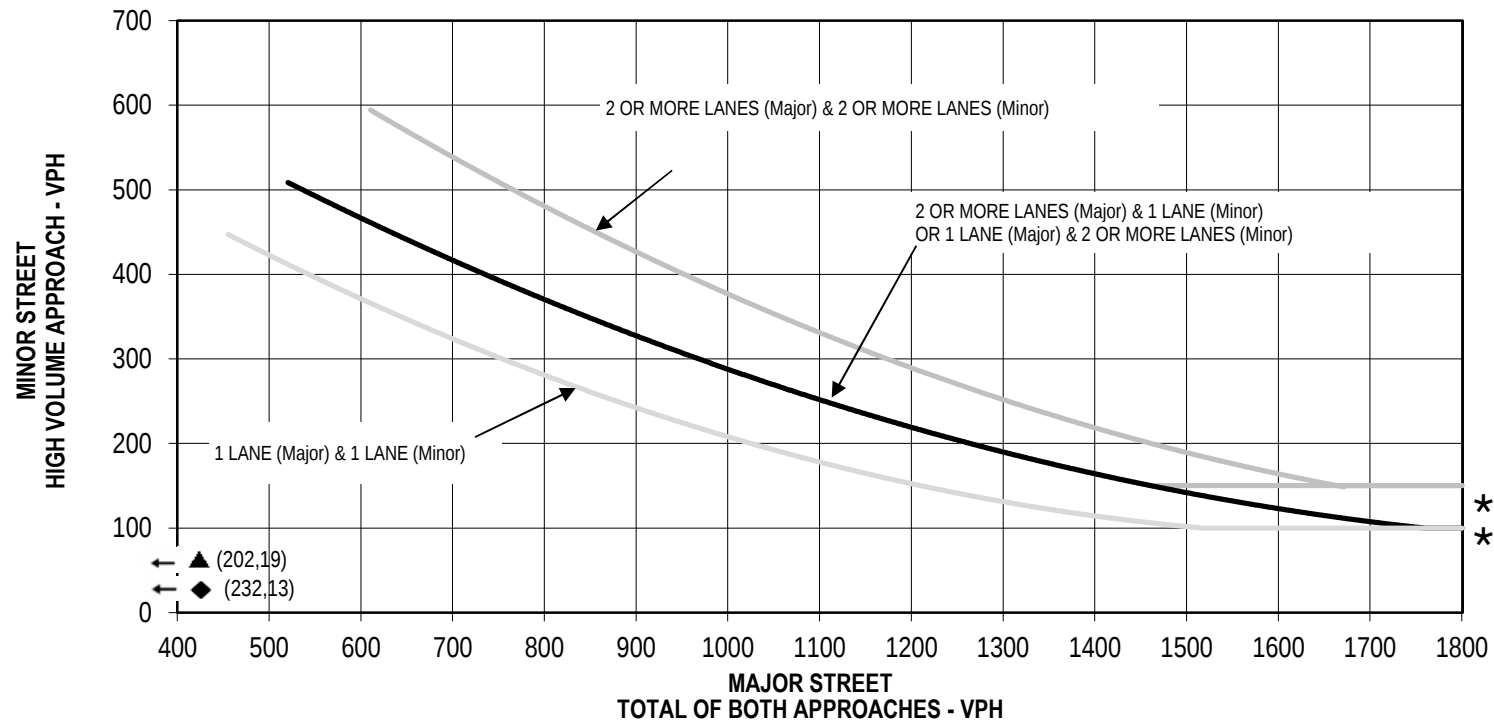
▲ AM Peak Hour

◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Eucalytpus St
Year 2031 With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

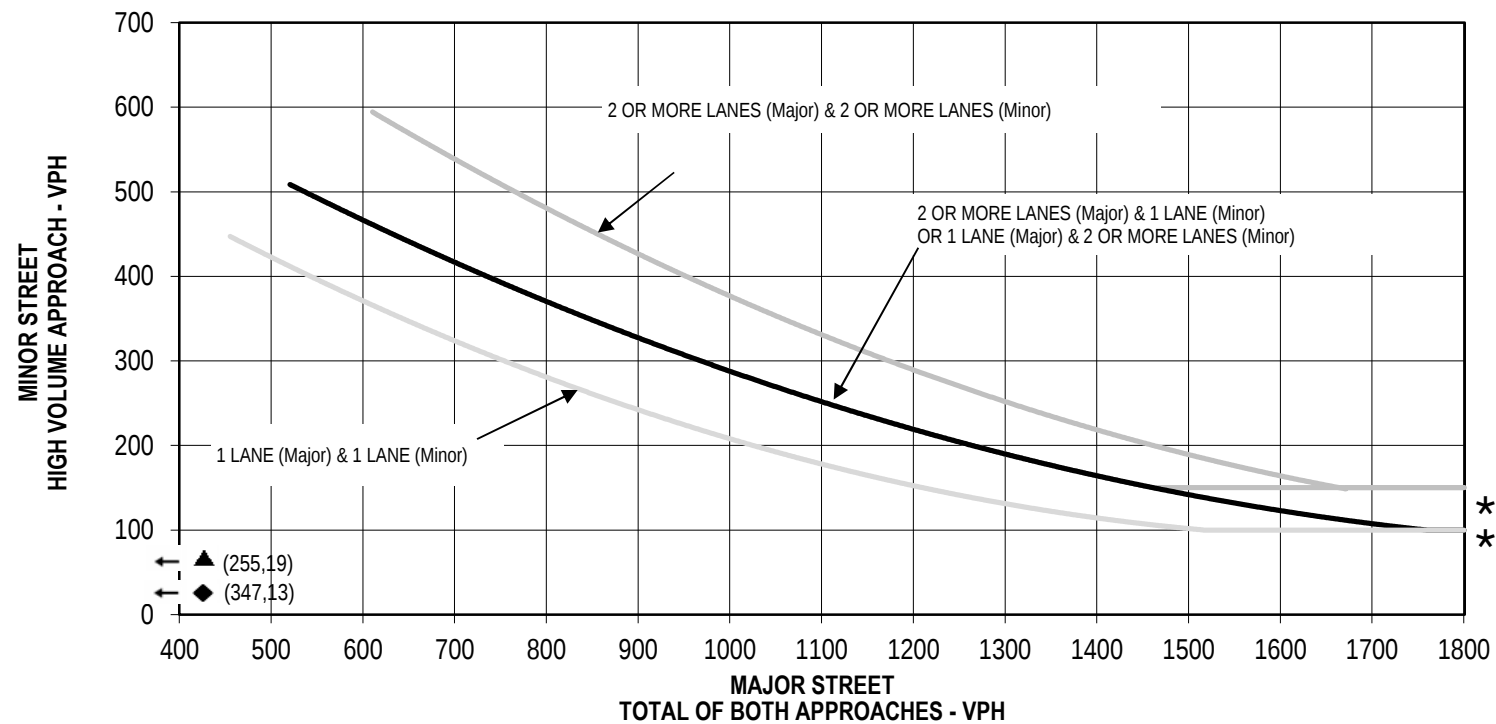
FIGURE D - 23

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Topaz Rd/Street A
Year 2031 With Project Peak Hour Signal Warrant**

WARRANT 3, PEAK HOUR



★ 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 approaching with one lane.

FIGURE D - 16

- ▲ AM Peak Hour
- ◆ PM Peak Hour

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

**Topaz Road and Eucalyptus Street Residential
Signal Warrant for Street B/Eucalyptus St
Opening Year With Project Peak Hour Signal Warrant**