

APPENDIX D – TRAFFIC STUDY

FOCUSED TRAFFIC ANALYSIS FOR GENERAL PLAN LEVEL OF SERVICE CONFORMANCE AND VEHICLE MILES TRAVELED (VMT) ANALYSIS

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PROPOSED CACTUS ROAD WAREHOUSE

VICTORVILLE, CALIFORNIA

Prepared by:



DAVID EVANS
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FINAL REPORT
June 11, 2024



June 11, 2024

Job No. PIX15AMG-0001

Mr. Simon Bouzaglou
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RE: FINAL FOCUSED TRAFFIC ANALYSIS FOR GENERAL PLAN LEVEL OF SERVICE CONFORMANCE AND VEHICLE MILES TRAVELED (VMT) ANALYSIS FOR PROPOSED CACTUS ROAD WAREHOUSE IN VICTORVILLE, CALIFORNIA (APNS: 3128-581-05 THRU 06)

Dear Mr. Bouzaglou,

David Evans and Associates, Inc. is pleased to submit this focused traffic study for your proposed project located at the southwest corner of the intersection of Cactus Road and Mesa Linda Avenue in the City of Victorville, California. This study includes an evaluation of the project's conformance with the city's General Plan level of service policies as well as a detailed Vehicle Miles Traveled (VMT) Analysis for determination of potentially significant environmental impacts under the California Environmental Quality Act (CEQA).

This study was prepared in accordance with the City of Victorville's Vehicle Miles Traveled (VMT) Analysis Guidelines as defined in Resolution 20-031 adopted by the City Council in May 2020, Victorville's General Guidelines for Conducting Traffic Studies and Determination of Intersection Level of Service and Improvement Needs (January 2005 as amended over time), and San Bernardino County's Transportation Impact Study Guidelines (July 2019). The technical scope of this study has been prepared in coordination with the City of Victorville Engineering Department requirements and scope of work approved prior to this report.

We are pleased to have been of assistance to you in processing and obtaining approval for the project. If you have any questions or comments, please feel free to contact me at 909-912-7304.

Respectfully submitted,

DAVID EVANS AND ASSOCIATES, INC.

A blue ink signature of James M. Daiza, P.E., written over a horizontal line.

James M. Daiza, P.E.
Senior Project Manager



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1 EXECUTIVE SUMMARY

This executive summary presents the findings and recommendations of this study.

1.1 Project Description

The project site is located on the southwest corner of the future intersection of Cactus Road and Mesa Linda Avenue in the City of Victorville, California. The proposed project consists of a 392,535 SF warehouse building with internal office space of 13,354 SF. The proposed project is bounded to the north, east, and south by vacant/undeveloped properties, and to the west by Cantina Road (future roadway) and the High Desert Truck Stop gas station/food mart. Access to the site is proposed from three driveways on Cactus Road, one driveway on Cantina Road, and one driveway on Mesa Linda Avenue.

1.2 City of Victorville Level of Service Standards

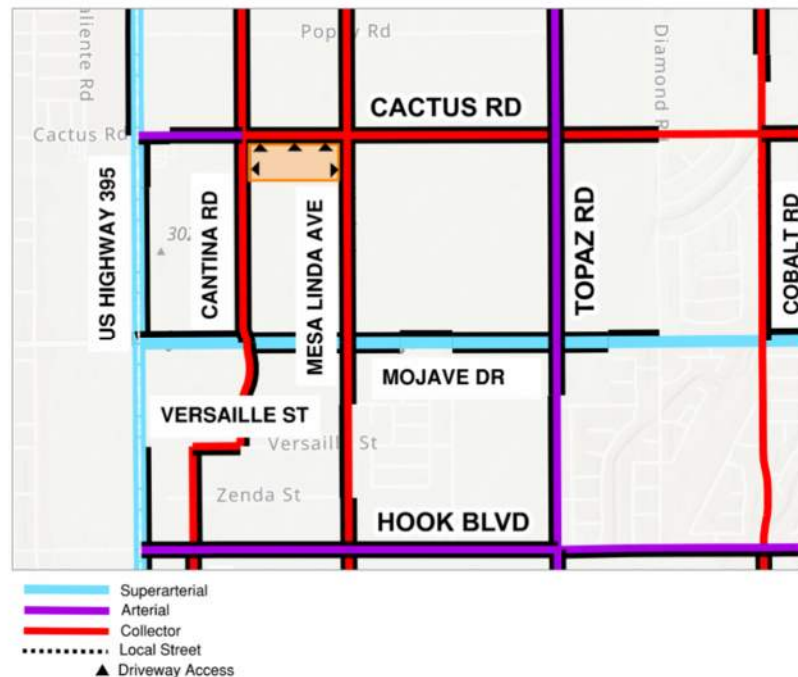
The City's peak hour level of service standard is LOS D. An intersection found to operate with a volume to capacity (V/C) ratio greater than 0.99 or with a control delay greater than 35 seconds per vehicle (i.e., LOS E or F) is considered deficient.

If a development project would worsen the peak hour level of service from a LOS D or better to a LOS E or LOS F, it is considered an impact that requires improvement to return the level of service to pre-project conditions. If a development project increases the peak hour control delay at an already deficient intersection by two percent or more, it is considered a significant impact that requires improvement to return the level of service to pre-project conditions.

1.3 General Plan Circulation System

Mojave Drive is classified as a super-arterial street in the city's general plan circulation element. This classification affects the spacing and allowable traffic control at intersections.

The proposed project relies on driveway access from city streets that surround the project site and the connections these streets make to the city's overall circulation system. Access to the site will be from driveways proposed on Cactus Road, Mesa Linda Avenue, and Cantina Road.



Currently, these three streets are unimproved roads. The project's proposed circulation and access plan includes extending and constructing the southern half of Cactus Road from end of its improved section (about 360 feet east of Highway 395) to Mesa Linda Avenue; constructing the western half of Mesa Linda Avenue from Cactus Road to the southern edge of the property; and constructing the eastern half of Cantina Road from Cactus Road to the southern edge of the property. The intersection of Mojave Drive at Mesa Linda Avenue is anticipated to be Signalized based on the project specific improvements the adjacent project Mojave 68 is conditioned to construct prior to the construction of the proposed project.

1.4 Level of Service Comparison With and Without the Proposed Project

1.4.1 Near-Term (2024) Cumulative Impacts

A comparison of level of service between Background Conditions and Background Plus Project Conditions (opening day scenario) is used to identify near-term level of service deficiencies that are cumulative in nature. Background ambient growth is comprised of traffic from local and regional development¹, and traffic from specific nearby approved development (e.g., residential Tentative Tract 20422, and Mojave 68 Project). Background Plus Project growth simply adds project generated traffic to background growth. A cumulative deficiency is typically mitigated by the development that adds traffic to the deficiency—each development contributing their fair-share of the cost of improving the deficit.

Table 1-1 compares the Background and Background Plus Project weekday peak hour level of service at the study intersections. Background Conditions represent the project's opening year of 2024, and the traffic projections include the components of growth described in the previous paragraph.

Table 1-1: Comparison of Background and Background + Project Intersection Levels of Service

Intersection	Control Type	Background Conditions				Background + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	39.3	D	14.3	B	40.5	D	17.6	B
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A		11.9	B	9.7	A
3. Mojave Dr / Mesa Linda Ave	TS	23.1	C	23.2	C	23.7	C	23.5	C
4. Highway 395 / Mojave Dr	TS	49.1	D	63.0	E	49.2	D	62.6	E
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection									

As shown in **Table 1-1**, under Background Plus Project Conditions, the addition of the project does not result in deficient intersections according to the guidelines of the City of Victorville.

Although the intersection of Highway 395 at Mojave Dr is anticipated to operate at an LOS E during the PM peak hour, the project does not contribute to a level of service deficiency because it does not increase the intersection's delay by two percent or more.

1.4.2 Mid-Term (2034) Cumulative Impacts

Table 1-2, on the following page, compares the Future (Year 2034) Background and Future (Year 2034) Background + Project weekday peak hour levels of service. Year 2034 Background Conditions represent ten years beyond the project's opening year.

Under Future Background + Project Conditions with ten years of cumulative growth, the addition of the project does not result in deficient intersections according to the guidelines of the City of Victorville.

Although the intersection of Highway 395 at Mojave Dr is anticipated to operate at an LOS E during the PM peak hour, the project does not contribute to a level of service deficiency because it does not increase the intersection's delay by two percent or more.

¹ Refer to Chapters 4 and 6 for more information on development of background traffic projections.

Table 1-2: Comparison of Future Background (Year 2034) and Future Background + Project Levels of Service

Intersection	Control Type	Future Background Conditions				Future Background + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	33.2	C	16.8	B	35.1	D	20.4	C
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A		13.2	B	10.1	B
3. Mojave Dr / Mesa Linda Ave	TS	25.1	C	26.9	C	26.1	C	27.5	C
4. Highway 395 / Mojave Dr	TS	47.3	D	71.3	E	47.7	D	72.2	E
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection									

1.5 Summary of Recommended Measures to Improve Level of Service Deficiencies

Table 1-3 summarizes the recommended measures to improve near-term (year 2024) and mid-term (year 2034) intersection level of service deficiencies to a LOS D or better in both peak hours.

Table 1-3: Summary of Measures to Improve Level of Service Deficiencies

Timeframe	Measure to Improve Level of Service Deficiency
Near-Term Opening Year 2024	1. <u>Highway 395 / Mojave Drive</u> : Add exclusive westbound right turn lane; Convert the current shared through-right-turn lane to a through lane only; provide right turn overlap phasing for the westbound and northbound right turns; optimize signal timing 2. <u>Mojave Drive / Mesa Linda Avenue</u> : Install traffic signal control with protected left turn phasing on all approaches (To be established by Mojave 68 Project, which has been conditioned to install the traffic signal.)
Mid-Term Future Year 2034	1. <u>Highway 395 / Mojave Drive</u> : The same as near-term measures described above. 2. <u>Mojave Drive / Mesa Linda Avenue</u> : The same as near-term measures described above

1.6 Project Fair-Share Contribution to Level of Service Deficiency Improvements

Table 1-4 shows the proposed project's percent contribution to the total growth in entering traffic volumes, otherwise known as the fair-share calculation. The formula for calculating the percentages in the table is:

$$\text{Percent of Total} = \frac{(\text{Total Project Trips})}{((\text{Total Non-Project Forecasted Trips} + \text{Total Project Trips}) - \text{Existing Trips})} \times 100\%$$

Table 1-4: Project's Percent Contribution (Fair Share) to Deficient Intersections by Year and Peak Hour

Scenario / Peak Hour	Highway 395 / Mojave Drive	Mojave Dr / Mesa Linda Ave
Near-Term % (Year 2024)		
AM Peak Hour	21.0%	29.7%
PM Peak Hour	18.5%	26.5%
Mid-Term % (Year 2034)		
AM Peak Hour	5.8%	8.1%
PM Peak Hour	4.9%	7.5%
Notes: Project traffic used in calculating the fair-share percentage is based on Passenger Car Equivalents (PCEs).		

The projects contribution in the Near-Term is anticipated to be 21.0% and in the Mid-Term is anticipated to be 5.8% of the cost of the improvements to Highway 395 at Mojave Drive. In the event that the Mojave 68 Project is delayed, the project contribution in the Near-Term is anticipated to be 29.7% and in the Mid-Term is anticipated to be 8.1% of the cost of the improvements to Mojave Drive at Mesa Linda Ave.

1.7 Long-Term (2044) Cumulative Impacts – Informational Purposes Only

Table 1-5 compares the future year 2044 and future year 2044 + project weekday peak hour levels of service. Year 2044 conditions represent a 20-year long range planning scenario which Caltrans requests to be included in traffic impact studies. Forecasts for the year 2044 analysis scenario are derived from the San Bernardino Transportation Analysis Model (SBTAM).

Under Future Year 2044 Conditions, the only deficient intersection is the signalized intersection of Highway 395 and Mojave Drive. It operates at LOS F during the PM peak hour.

When project traffic is added to the year 2044, the signalized intersection of Highway 395 and Mojave Drive still operates at LOS F during the PM peak hour. None of the other intersections is deficient, but the delay increases when the project traffic is added.

Table 1-5: Comparison of Future Year 2044 and Future Year 2044 + Project Intersection Level of Service

Intersection	Control Type	Future Conditions				Future + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	38.6	D	20.0	C	41.4	D	26.0	C
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A		13.3	B	11.4	B
3. Mojave Dr / Mesa Linda Ave	TS	25.9	C	26.8	C	26.7	C	27.3	C
4. Highway 395 / Mojave Dr	TS	68.5	E	117.0	F	71.7	E	120.9	F
Notes:									
Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F).									
Capacity analysis is based on trucks converted to passenger car equivalents (PCE's)									
Abbreviations:									
Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection									

1.8 Summary of Vehicle Miles Travelled (VMT) Analysis

The VMT analysis screening assessment included in the approved December 6, 2022; scoping agreement concluded that proposed project satisfies the City's two screening criteria and therefore has less than significant impact on VMT and does not require a VMT analysis.

1.8.1 Vehicle Miles Traveled (VMT) Screening

The following is a screening assessment of the project based on criteria in the City of Victorville's Resolution No. P-20-010 *Vehicle Miles Traveled (VMT) Analysis Guidelines* adopted by the city in May of 2020.

Project Screening from Conducting VMT Analyses

Victorville uses screening criteria to determine if a development project is required to conduct a VMT analysis to identify potentially significant transportation impacts under CEQA. If a project satisfies one the criteria described below it is considered to have a less than significant impact on VMT and does not require a VMT analysis. Victorville has two criteria for screening projects from requiring a VMT analysis.

1. Screening for Net Increase in Daily Vehicle Trips

As shown in **Table B**, the project's net increase in daily trips is about 958 trips which is under the threshold of 1,285 daily trips established in the City's guidelines. Based on this criterion, the project is screened from requiring a VMT analysis.

2. Land Use Type Screening

The proposed project is comprised of warehousing with a total floor area of 405,889 square feet which is less than the City's threshold of 829,000 square feet for warehousing. Based on this criterion, the project is screened from being required to conduct a VMT analysis.

2 INTRODUCTION

This study evaluates the proposed project for conformance with the City of Victorville's General Plan level of service policies. This is done in accordance with the City of Victorville's traffic impact study guidelines and under the following analysis scenarios as outlined in the traffic scope approved by the City's Department of Public Works:

- Existing Conditions - Chapter 3
- Background Conditions (Year 2024) - Chapter 4
- Background Plus Project Conditions (Year 2024) - Chapter 5
- Future Background (Year 2034) Conditions – Chapter 6
- Future Background (Year 2034) Plus Project Conditions - Chapter 7
- Future (Year 2044) Conditions – Chapter 8
- Future (Year 2044) Plus Project Conditions – Chapter 9

Figure 1 provides a vicinity map, and **Figure 2** illustrates the proposed project site plan.

2.1 Analysis Scenarios

Existing Conditions. This scenario represents existing transportation conditions at the time this report was prepared. Data includes traffic counts collected in December 2022. This scenario is used as a baseline condition to identify existing deficiencies and establish context.

Background Conditions (Year 2024). This scenario represents conditions at the time the project is anticipated to be fully constructed and occupied (known as buildout year 2024) but without traffic generated by the project. This scenario is comprised of an ambient growth, a general rate of growth in traffic from overall regional growth but not specific to any nearby development (assumed to be 3.5% annually for this study). In addition, the City identified approved development projects in the immediate vicinity of the proposed project—Tentative Tract 20422 and Mojave 68 Project—is included in all background scenarios. The approved improvements from Mojave 68 project were used for this scenario.

Background + Project Conditions (Year 2024). This scenario adds the project's estimated traffic generation at buildout (2024) to the Background Conditions Scenario described above.

Future Background Conditions (Year 2034). The future background (year 2034) scenario represents a 10-year forecast of conditions in the planning horizon year of 2034 without traffic generated by the project. This scenario is comprised of ambient growth over a 10-year period, at a general rate of growth in traffic (assumed to be 3.5% annually for this study). This scenario also includes traffic generated by planned and/or approved other area projects as identified by the City.

Future Background Plus Project Conditions (Year 2034). This scenario adds the project's estimated traffic generation to the Future Background Condition's scenario described above.

Future Year 2044 Conditions. This scenario represents Caltrans' long-range 20-year planning horizon. Conditions identified in this scenario inform Caltrans of potential congestion problems in the future, but deficiencies and improvements identified in this analysis scenario are not used by the City of Victorville and are not integrated to any development conditions of approval. The approved improvements from Mojave 68 project were used for this scenario, and these improvements differ from the ones used in the 2024 and 2034 conditions.

Future Year 2044 + Project Conditions. This scenario adds the project's estimated traffic generation at buildout (2024) to the Future 2044 Conditions described above.

Deficiencies identified in the near-term (2024) and mid-term (2034) scenarios are "cumulative" impacts—impacts that the project contributes to, but does not solely cause, but may be responsible for a fair-share of the cost to implement any improvement measures.

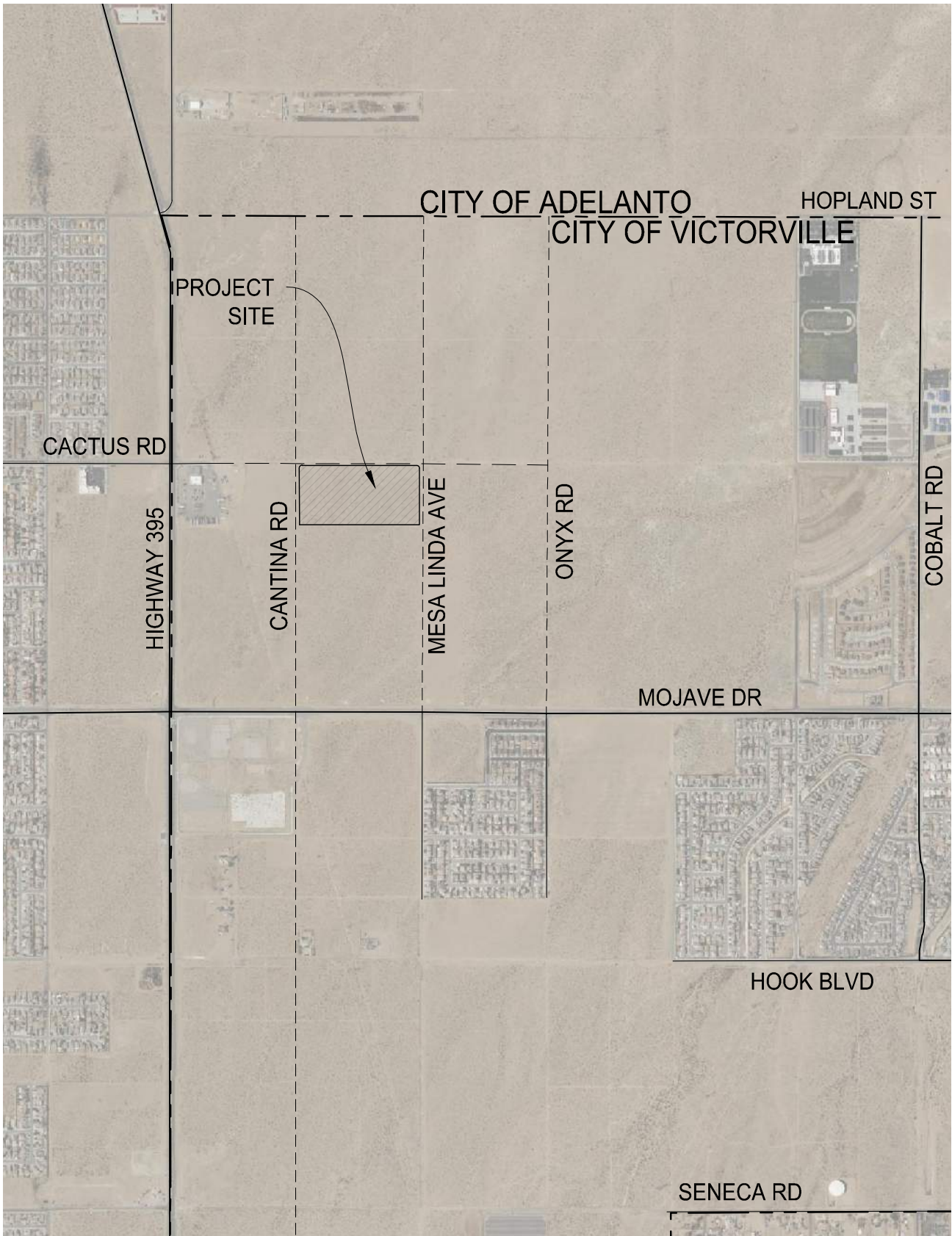


**FIGURE 1: VICINITY MAP
PROPOSED CACTUS WAREHOUSE
VICTORVILLE, CALIFORNIA**

FIGURE 2: SITE PLAN
PROPOSED CACTUS WAREHOUSE
VICTORVILLE, CALIFORNIA



3 EXISTING CONDITIONS

3.1 Existing Street System

The following roadways provide local and regional access to the project within the study area:

Highway 395 is a major north-south primarily four-lane road (two lanes in each direction with a turn pockets at key intersections). Highway 395 is identified as a super arterial on the City of Victorville Circulation Plan. The posted speed limit within the project area is 55 mph.

Mojave Drive is a major east-west primarily four-lane road (two lanes in each direction with a raised curbed median, and with turn pockets at key intersections) within the project vicinity. Mojave Drive is identified as a super arterial on the City of Victorville Circulation Plan. The posted speed limit is 60 mph.

Cactus Road is a local east-west primarily two-lane road (one lane in each direction with a turn pocket at key intersections). A segment of Cactus Road starting at Highway 395 to approximately 1,300 feet east is identified as an arterial on the City of Victorville Circulation Plan. Cactus Road 395 is identified as a collector on the City of Victorville Circulation Plan.

Mesa Linda Avenue is a local north-south primarily two-lane road (one lane in each direction), in the project area. Mesa Linda Avenue is identified as a collector on the City of Victorville Circulation Plan. Currently Mesa Linda Avenue is a dirt road north of Mojave Avenue. It will provide direct access to the project site.

3.2 Study Intersections

The study area for determining level of service deficiencies includes three existing intersections and one future intersection:

- | | |
|--------------------------------------|--|
| 1. Highway 395 at Cactus Road | 2. Cactus Road at Mesa Linda Avenue
(Future Intersection) |
| 3. Mojave Drive at Mesa Linda Avenue | 4. Highway 395 at Mojave Drive |

The intersections of Highway 395 at Mojave Drive and Highway 395 at Cactus Road are signalized. The intersection of Mojave Drive at Mesa Linda Avenue is side street stop-controlled, with three paved approaches. The intersection of Cactus Road and Mesa Linda Avenue is a future intersection.

3.3 Existing Traffic Volumes

Turn movement counts were conducted in December 2022 by Newport Traffic Studies, an independent traffic data collection company. The counts were collected during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods. The raw turning movement counts are included in **Appendix B** of this study.

3.4 Capacity Analysis Methodology

Intersection capacity analyses are conducted using Synchro software², which implements the methods of the Highway Capacity Manual, 6th Edition (HCM 6)³ used in this report. The traffic analysis methodology concepts presented in Chapter 19 and Chapter 20 of the Highway Capacity Manual, 6th Edition (HCM 6) are used to calculate intersection Level of Service (LOS) based on the average control delay (in seconds per vehicle) of vehicles utilizing the intersection.

The LOS for a signalized intersection is calculated for the intersection as a whole in Synchro. **Table 3-1** provides LOS thresholds for signalized intersections as provided in the HCM 6 Chapter 19. The level of service for a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay. The LOS for the intersection is determined by the minor-street movement (or shared

² Trafficware Ltd, Version 10.

³ Transportation Research Board, Washington D.C., 2010.

movement) with the worst level of service using the criteria provided in **Table 3-2** referenced from HCM 6 Chapter 20.

Table 3-1: Level of Service Criteria for Signalized Intersections

Control Delay (seconds/vehicle)	LOS by Volume-to-Capacity Ratio [a]	
	Volume / Capacity Ratio ≤ 0.99	Volume / Capacity Ratio < 1.0
≤ 10	A	F
$> 10 - 15$	B	F
$> 15 - 25$	C	F
$> 25 - 35$	D	F
$> 35 - 50$	E	F
> 50	F	F

[a] For approach-based and intersection-wide assessments, LOS is defined solely by control delay. Source: Highway Capacity Manual 6th Edition, Exhibit 19-8.

Table 3-2: Level of Service Criteria for Two-Way (TWSC) Stop-Controlled Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c > 1.0$
0 - 10	A	F
$> 10 - 15$	B	F
$> 15 - 25$	C	F
$> 25 - 35$	D	F
$> 35 - 50$	E	F
> 50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for the uncontrolled major-street approaches or for the intersection as a whole.
Source: Highway Capacity Manual 6th Edition, Exhibit 20-2.

3.1 City of Victorville Level of Service Standard

The City's peak hour level of service standard is LOS D. An intersection found to operate with a volume to capacity (V/C) ratio greater than 0.99 or with a control delay greater than 35 seconds per vehicle (i.e., LOS E or F) is considered deficient.

If a development project would worsen the peak hour level of service from a LOS D or better to a LOS E or LOS F, it is considered an impact that requires improvement to return the level of service to pre-project conditions. If a development project increases the peak hour control delay at an already deficient intersection by two percent or more, it is considered a significant impact that requires improvement to return the level of service to pre-project conditions.

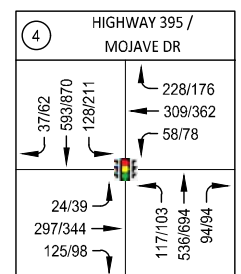
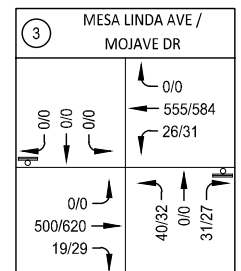
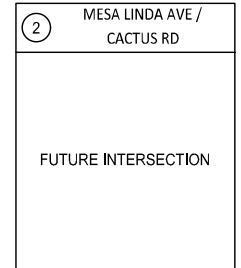
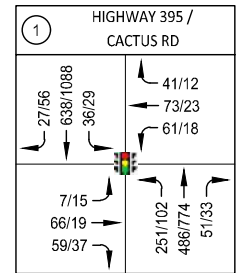
3.2 Existing Traffic Analysis

Existing intersection capacity and level of service analyses are based on the existing intersection geometrics and the AM and PM peak hour traffic volumes counts. The results of the analysis are shown in **Table 3-3** and provided in **Appendix C**. As shown in **Table 3-3**, there are currently no deficient intersections. **Figure 3** illustrates the existing peak hour traffic volumes used in the analysis, and **Figure 4** illustrates the existing intersection geometrics.

Table 3-3: Intersection Capacity Analysis – Existing Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Road	TS	34.6	C	12.6	B
2. Cactus Road / Mesa Linda Avenue (future intersection)	SSSC	N/A		N/A	
3. Mojave Drive / Mesa Linda Avenue	SSSC	24.1	C	28.5	D
4. Highway 395 / Mojave Drive	TS	46.9	D	53.4	D

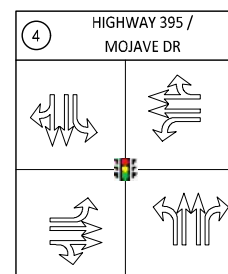
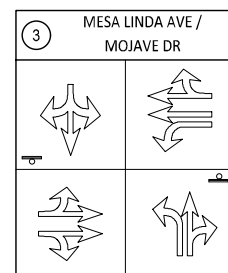
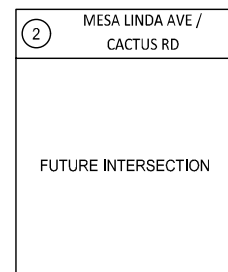
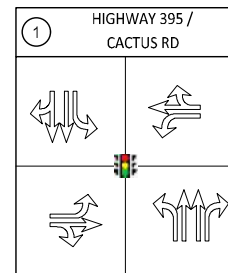
Abbreviations:
Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection



LEGEND

- XX/XX ↗ - AM/PM TRAFFIC VOLUMES
- ① - STUDY INTERSECTIONS
- 🚦 - SIGNALIZED INTERSECTION
- 🛑 - STOP CONTROLLED APPROACH

FIGURE 3: EXISTING CONDITION TRAFFIC VOLUMES
PROPOSED CACTUS WAREHOUSE
VICTORVILLE, CALIFORNIA



LEGEND

- EXISTING GEOMETRICS
- STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH

4 BACKGROUND CONDITIONS (YEAR 2024)

This scenario represents conditions at the time the project is anticipated to be fully constructed and occupied (known as buildout year 2024) but without traffic generated by the project. This scenario is comprised of ambient growth over a two-year period, at a general rate of growth in traffic from overall regional growth but not specific to any nearby development (assumed to be 3.5% annually for this study). In addition, the City identified approved development projects in the immediate vicinity of the proposed project. Traffic generated by these Other Area Projects (OAP)—a 64-unit residential development (Tentative Tract 20422), and a 1,057,300 SF warehouse with 40,000 SF office area (Mojave 68)—is included in all background scenarios. The approved improvements from Mojave 68 project were used for this scenario.

4.1 Ambient Growth Projections

The proposed project is anticipated to be constructed and occupied in the Year 2024. As stated earlier in this report, near-term growth in traffic is comprised of regional ambient growth and traffic generated by other area projects that specifically includes the 64-unit residential Tentative Tract 20422 and the adjacent Mojave 68 Industrial Site Project as requested by the City during the scoping process. Ambient growth is estimated as a 3.5% annual increase.

4.2 Background Conditions (Year 2024) Traffic Analysis

The Background Conditions traffic volumes are illustrated in **Figure 5**. Intersection capacity analysis for this scenario uses existing lanes geometries and it incorporates the approved mitigations from Mojave 68 Project. The results of the analysis are shown in **Table 4-1** and provided in **Appendix C**.

Table 4-1: Intersection Capacity Analysis – Background Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Road	TS	39.3	D	14.3	B
2. Cactus Road / Mesa Linda Avenue (future intersection)	SSSC	N/A		N/A	
3. Mojave Drive / Mesa Linda Avenue	TS	23.1	C	23.2	C
4. Highway 395 / Mojave Drive	TS	49.1	D	63.0	E
<u>Notes:</u> Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) <u>Abbreviations:</u> Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection					

As presented in **Table 4-1**, under Background Conditions, the study intersections are anticipated to operate at an acceptable level of service with the exception of the intersection of Highway 395 at Mojave Dr.

The intersection of Highway 395 at Mojave Dr is anticipated to operate at an LOS E during the PM peak hour. This is considered below the City's peak hour level of service standard. As a result, this intersection is identified as cumulative deficiencies occurring prior to the addition of project traffic.



① HIGHWAY 395 / CACTUS RD	
29/60 69/1168 45/34	46/20 83/40 67/26
7/16 73/22 63/40	269/109 523/838 72/46

② MESA LINDA AVE / CACTUS RD	
FUTURE INTERSECTION	

③ MESA LINDA AVE / MOJAVE DR	
10/33 0/0 14/52	0/0 599/642 33/48
43/19 535/663 26/46	57/43 0/0 35/31

④ HIGHWAY 395 / MOJAVE DR	
40/66 637/938 148/238	254/203 334/397 78/117
26/42 327/372 134/105	125/110 560/746 130/119

LEGEND

- XX/XX - AM/PM TRAFFIC VOLUMES
- ① - STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH

FIGURE 5: BACKGROUND TRAFFIC VOLUMES
 PROPOSED CACTUS WAREHOUSE
 VICTORVILLE, CALIFORNIA

5 BACKGROUND PLUS PROJECT CONDITIONS

The Background Plus Project Conditions Scenario adds the project's estimated traffic generation at buildout (2024) to the Background Conditions Scenario evaluated in the previous chapter. Level of service deficiencies identified in this scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any mitigation measures.

5.1 Project Trip Generation

The proposed project is a speculative warehouse where the tenant(s) and function as a potential short term storage facility, distribution center, fulfillment center, etc. is unknown. While the impact analysis needs to reflect a reasonable spectrum of tenant types, there is a risk when estimating trip generation of over or under-estimating traffic. The 11th Edition of the Institute of Transportation Engineers' Trip Generation manual contains data for the most common types of warehouse operations with a wide range of rates.

Table 5-1 summarizes the trip generation rates for warehouse facilities in the current edition of ITE's Trip Generation.

Table 5-1: Trip Generation Rates for ITE Land Use Categories of Warehousing

Warehouse Type	ITE Land Use Code	Average Trip Generation Rates for Warehouse Types (Trips Per KSF) (Source: ITE Trip Generation 11th Edition)		
		Average Daily Traffic	AM Peak Hour of Adjacent Street Traffic	PM Peak Hour of Adjacent Street Traffic
		Total (In + Out)	Total (In + Out)	Total (In + Out)
High-Cube Transload and Short-Term Storage Warehouse	154	1.54	0.08	0.10
High-Cube Cold Storage Warehouse	157	2.12	0.11	0.12
High-Cube Fulfillment Center Warehouse - Non-Sort	155	1.81	0.15	0.16
General Warehouse	150	1.71	0.17	0.18
High-Cube Parcel Hub Warehouse	156	4.63	0.70	0.64
High-Cube Fulfillment Center Warehouse - Sort	155	6.44	0.87	1.20
Average of All Warehouse Types		3.04	0.35	0.40
Average Without High-Cube Sort Fulfillment Center		2.36	0.24	0.24

To help select a trip generation rate for the proposed project representative of the range of potential owners/tenants, **Table 5-1** includes the average of the rates for all warehouse types in the ITE Trip Generation manual and the average of the rates for all warehouse types except High-Cube Fulfillment Sort Facility—the most intensive type of warehouse which is not expected for the proposed project. The secondary average rate (excluding High-Cube Fulfillment Sort Facility) represents two thirds the ITE warehouse types and covers a broad range of tenant types and operations.

Table 5-2 summarizes the estimated trip generation of the proposed project for an average weekday, and weekday AM (7-9 AM) and PM (4-6 PM) peak hours, based on the secondary average rates identified in **Table 5-1**. The proposed warehouse complex would generate about 950 vehicle trips per day and 99 vehicle trips in both the AM and PM peak hours.

It is standard practice to convert vehicle trips to passenger car equivalents (PCEs) for intersection capacity analysis. This conversion reflects the effects of large vehicles on intersection operations not just from the physical space a truck occupies but also from their effect on the intersection's saturation flow rate due to the slower acceleration of trucks.

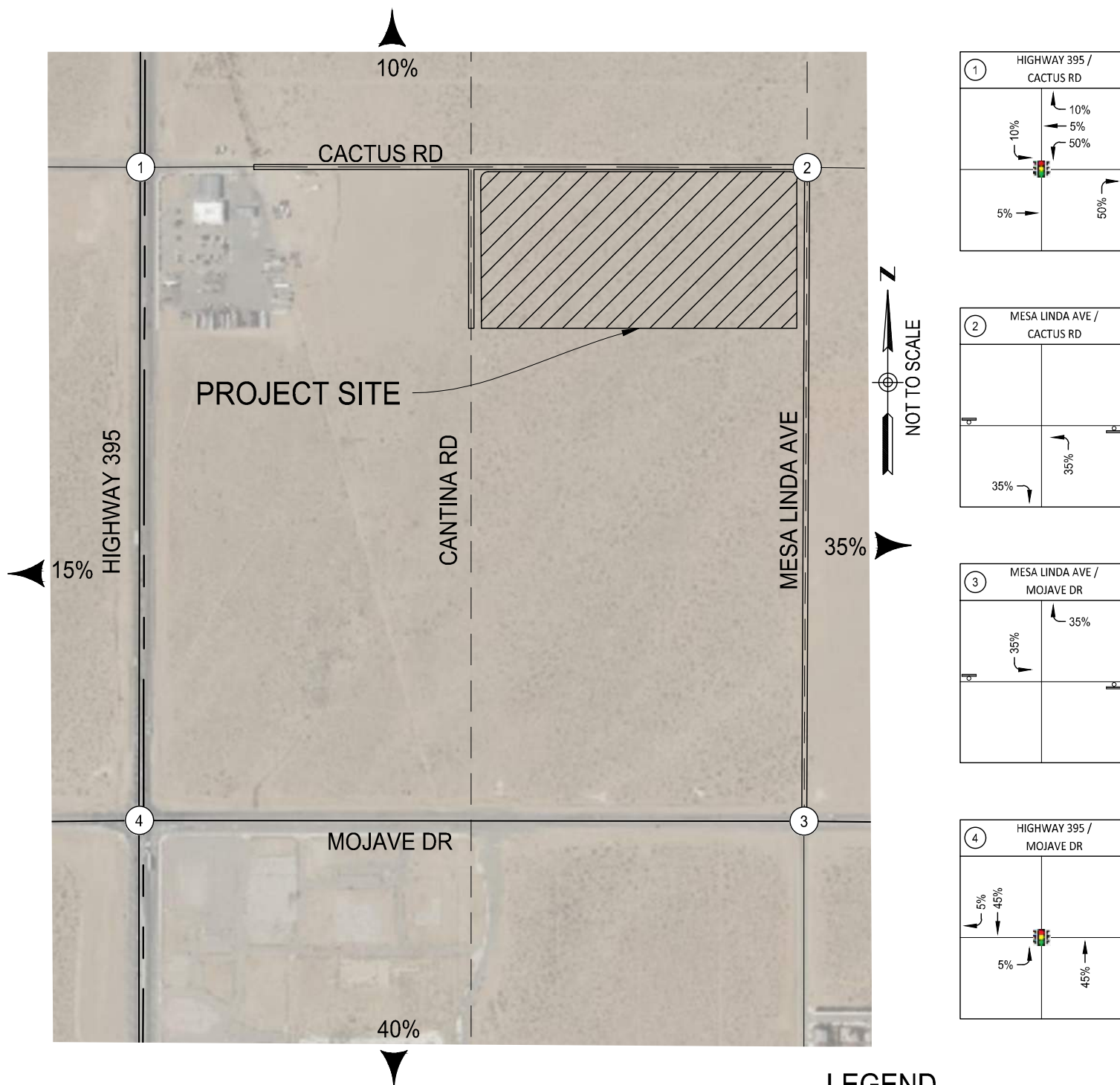
When converted to PCEs, the Cactus Warehouse generates about 1,350 daily PCEs, 139 PCEs in the AM peak hour, and 140 PCEs in the PM peak hour.

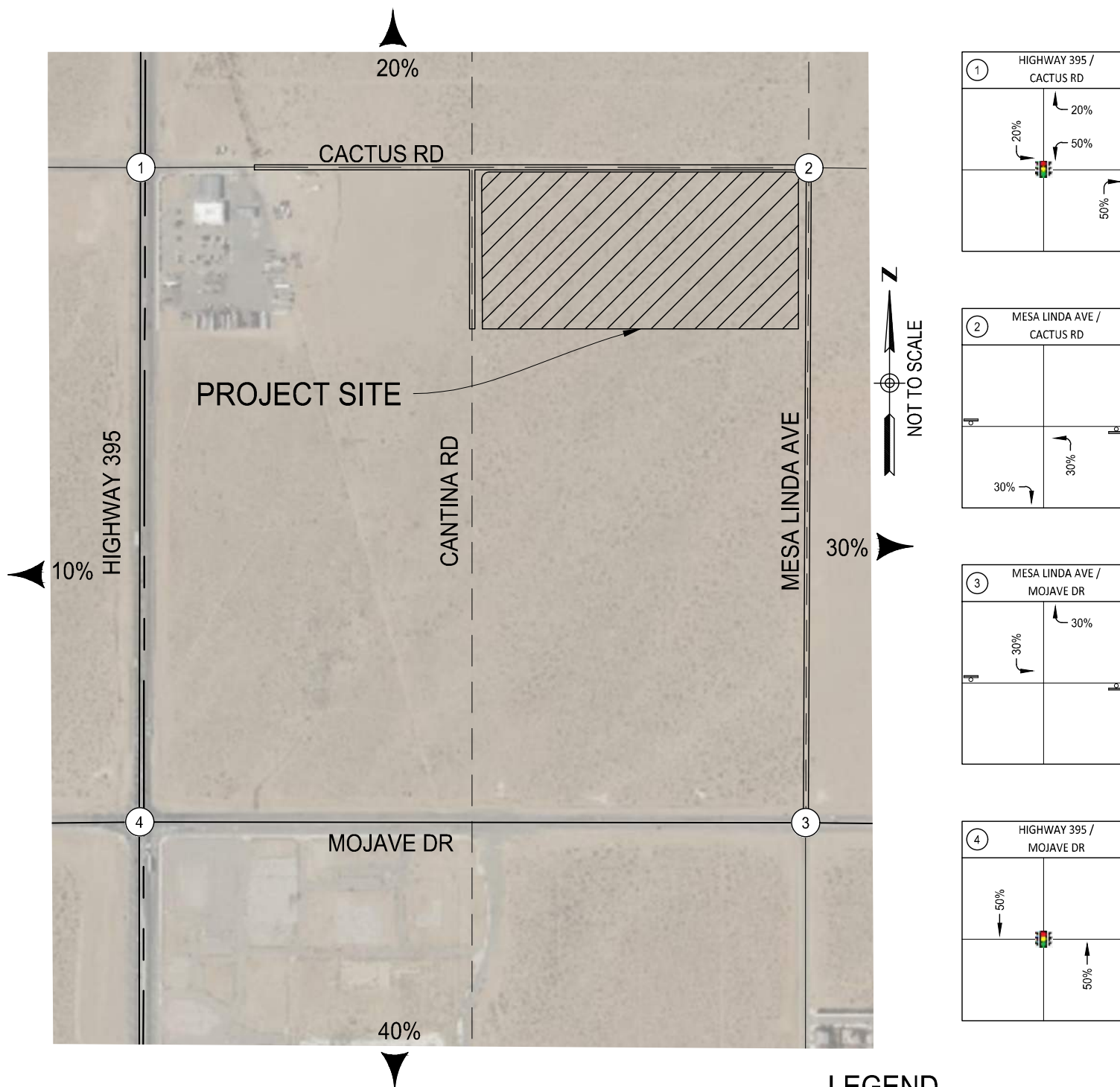
Table 5-2: Project Trip Generation

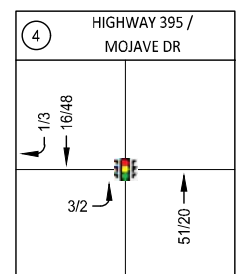
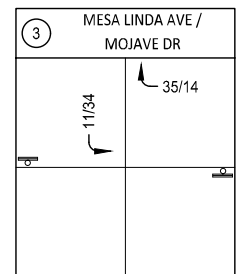
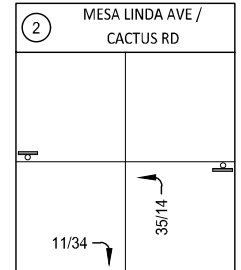
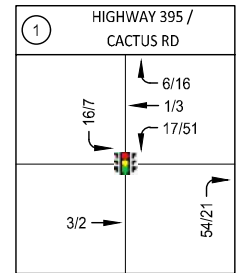
Land Use	Gross Floor Area (KSF)	Daily	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			In	Out	Total	In	Out	Total
Warehouse (ITE Land Use Category 150)	405.89	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
		2.36	0.18	0.06	0.24	0.07	0.17	0.24
		Total Vehicle Trip Generation						
		958	76	23	99	28	71	99
	Mode Share	Project Trip Generation by Vehicle Type						
Passenger Cars (Percent of Total)	74.21%	711	56	17	73	21	53	73
2-Axle Trucks (Percent of Total)	4.55%	44	3	1	4	1	3	4
3-Axle Trucks (Percent of Total)	4.18%	40	3	1	4	1	3	4
4-Axle Trucks (Percent of Total)	17.04%	163	13	4	17	5	12	17
	PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
Passenger Cars)	1.0	711	56	17	73	21	53	73
2-Axle Trucks	1.5	65	5	2	7	2	5	7
3-Axle Trucks	2.0	80	6	2	8	2	6	8
4 + Axle Trucks	3.0	490	39	12	50	15	36	50
Total Passenger Car Equivalents (PCE)		1,346	106	33	139	40	100	140
Notes: KSF = Thousands of Square Feet. AM / PM Peak Hour of Adjacent Street Traffic = trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods. Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition). Source of passenger car / truck mode share (percentage of total): South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2016). Based on data from eight high cube warehouses in the Inland Empire over 1,000,000 square feet in size. The average warehouse building size in the study was 1,364,496 square feet. Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions.								

5.2 Project Trip Distribution and Assignment

The distribution of the automobile trips (employees/visitors) is illustrated in **Figure 6**. The distribution of truck trips is illustrated in **Figure 7**. Truck trips are distributed to truck routes designated in Victorville's General Plan, the nearest of which includes Mojave Drive from I-15 to Highway 395. Highway 395, as a state highway, is also a designated truck route by the State of California. The assignment of total project trips (automobile plus trucks in passenger car equivalent) to proposed study intersections is illustrated in **Figure 8**.







TOTAL PCE PROJECT TRIPS

AM PEAK HOUR - 106 IN / 33 OUT
PM PEAK HOUR - 40 IN / 100 OUT

LEGEND

- XX/XX - AM/PM TOTAL PCE PROJECT TRIPS
① - STUDY INTERSECTIONS
 - SIGNALIZED INTERSECTION
 - STOP CONTROLLED APPROACH

5.3 Background Plus Project Traffic Analysis

Project trip generation, traffic distribution and assignment patterns are used in the intersection capacity analyses to assess potential project impacts to level of service. Project trips are added to background traffic volumes to derive Background Plus Project Conditions. The traffic volumes used in this scenario are illustrated in **Figure 9**. The intersection capacity analysis in this section uses background lane geometries, including the mitigations from Mojave 68 Project. Those geometrics are illustrated in **Figure 10**. The results of the analysis are shown in **Table 5-3** and provided in **Appendix C**.

Table 5-3: Intersection Capacity Analysis – Background Plus Project Conditions

Intersection	Control Type	Background Conditions				Background + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	39.3	D	14.3	B	40.5	D	17.6	B
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A		11.9	B	9.7	A
3. Mojave Dr / Mesa Linda Ave	TS	23.1	C	23.2	C	23.7	C	23.5	C
4. Highway 395 / Mojave Dr	TS	49.1	D	63.0	E	49.2	D	62.6	E
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection									

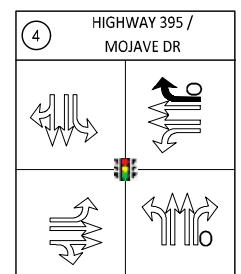
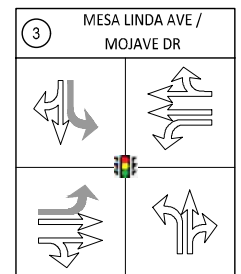
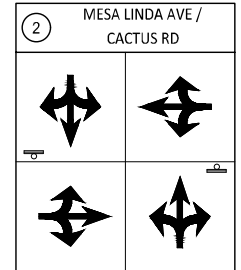
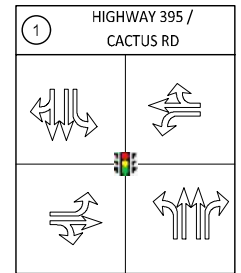
As presented in **Table 5-3**, under Background Plus Project Conditions, the LOS for all of the study intersections during both the AM and PM peak hours remain the same. The delays increase slightly for all of the intersections.

5.4 Recommended Measures to Improve Near-Term (Year 2024) Intersection Level of Service Deficits

Table 5-4 describes the recommended widening, lane geometry and traffic control improvements for improving level of service deficiencies in the near-term Background Plus Project analysis scenario. Background Plus Project intersection geometrics are illustrated in **Figure 10**.

Table 5-4: Off-Site Intersection Improvements

Intersection	Recommended Improvements
Highway 395 at Mojave Drive	<u>Westbound Approach of Mojave Drive</u> The proposed improvements to Mojave Drive include providing a 275-foot-long exclusive westbound right turn lane, converting the current shared through-right-turn lane into a through lane only, and modifying the signal timing to accommodate a westbound right turn overlap phase. <u>Northbound Approach of Highway 395</u> The proposed improvements to Highway 395 include modifying the signal timing to accommodate northbound right turn overlap phase. <u>Overall Intersection Improvements</u> Overall improvements to the intersection include optimization of the signal cycle length, green splits, and coordination offsets.
Mojave Drive at Mesa Linda Avenue	<u>Intersection Improvements</u> Install traffic signal control with protected left turn phasing on all approaches (To be established by Mojave 68 Project, which has been conditioned to install the traffic signal.)



LEGEND

- PROJECT GEOMETRICS
- MITIGATIONS SPECIFIC TO MOJAVE 68 PROJECT
- EXISTING GEOMETRICS
- STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH
- RIGHT TURN OVERLAP PHASING

5.5 Near-Term (Year 2024) Improvements

The signalized intersection of Highway 395 at Mojave Drive in the background + project analysis scenario undergoes regional improvements. This intersection is owned by Caltrans.

Table 5-5 presents the resulting levels of service with implementation of the recommended measures. The signalized intersection of Highway 395 and Mojave Drive requires:

- Widening to accommodate exclusive a right turn lane in the westbound direction, with right turn overlap phasing (note that U-turns are prohibited on all approaches of this intersection—a prerequisite to implementing overlap phasing)

Table 5-5: Background (Year 2024) + Project Conditions - Recommended Improvements

Intersection	Control Type	Background (Year 2024) + Project Conditions			
		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
4. Highway 395 / Mojave Drive	TS	49.2	D	62.6	E
Improvements: WB: Separate the shared through-right turn lane to a through lane and an exclusive right turn lane. Provide right turn overlap phasing. NB: Provide right turn overlap phasing.	TS	37.3	D	34.6	C

With provision of the right turn lanes and implementation of the overlap phasing schemes, the intersection of **Highway 395 and Mojave Drive** would operate at a LOS D in the AM peak hour and a LOS C in the PM peak hour.

6 FUTURE BACKGROUND (YEAR 2034) CONDITIONS

The future background (year 2034) scenario represents a 10-year forecast of conditions in the planning horizon year of 2034 without traffic generated by the project. This scenario is comprised of ambient growth over a 10-year period, at a general rate of growth in traffic (assumed to be 3.5% annually for this study). This scenario also includes traffic generated by planned and/or approved other area projects as identified by the City. The City identified two nearby approved projects to include in this cumulative analysis—a 64-unit residential development (Tentative Tract 20422), and a 1,057,300 SF warehouse with 40,000 SF office area (Mojave 68).

6.1 Future Background (Year 2034) Traffic Analysis

The future background (year 2034) forecasted traffic volumes are illustrated in **Figure 11**. Intersection capacity analysis for the study intersections is based on the background lanes geometries, including the mitigations that are approved for Mojave 68 Project. The results of the analysis are shown in **Table 6-1** and provided in **Appendix C**.

Table 6-1: Intersection Capacity Analysis – Future Background (Year 2034) Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	33.2	C	16.8	B
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A	
3. Mojave Dr / Mesa Linda Ave	TS	25.1	C	26.9	C
4. Highway 395 / Mojave Dr	TS	47.3	D	71.3	E
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection					

As presented in under the **Table 6-1**, under Future Background (Year 2034) Conditions, the study intersections are anticipated to operate at an acceptable level of service with the exception of the intersection of Highway 395 at Mojave Dr.

The intersection of Highway 395 at Mojave Dr is anticipated to operate at an LOS E during the PM peak hour. This is considered below the City's peak hour level of service standard. As a result, this intersection is identified as cumulative deficiencies occurring prior to the addition of project traffic.

7 FUTURE BACKGROUND (YEAR 2034) PLUS PROJECT CONDITIONS

The Future Background (Year 2034) Plus Project Scenario adds the project's estimated traffic generation to the Future Background (Year 2034) Scenario described in the previous chapter. Level of service impacts identified in this scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any mitigation measures.

7.1 Future Background (Year 2034) Plus Project Traffic Analysis

The traffic volumes under this scenario are illustrated in **Figure 12**. The intersection capacity analysis for this scenario is based on the future lane geometries, including the mitigations that were approved for Mojave 68 Project. The results of the analysis are shown in **Table 7-1** and provided in **Appendix C**.

Table 7-1: Comparison of Future Background (Year 2034) and Future Background + Project Levels of Service

Intersection	Control Type	Future Background Conditions				Future Background + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	33.2	C	16.8	B	35.1	D	20.4	C
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A		13.2	B	10.1	B
3. Mojave Dr / Mesa Linda Ave	TS	25.1	C	26.9	C	26.1	C	27.5	C
4. Highway 395 / Mojave Dr	TS	47.3	D	71.3	E	47.7	D	72.2	E
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection									

As presented in **Table 7-1**, under Future Background (Year 2034) Plus Project Conditions, the intersection of Highway 395 and Mojave Drive will continue to operate at LOS E during the PM peak hour after adding the project traffic, with a slight increase in the delay.

7.2 Recommended Measures to Improve Mid-Term (Year 2034) Intersection Level of Service Deficits

The signalized intersection of **Highway 395 and Mojave Drive** does not require any additional measures beyond what was recommended under 2024 conditions. In 2034, the intersection of **Highway 395 and Mojave Drive** will still operate at LOS D in the AM peak hour and PM peak hour, with the improvements.

Table 7-2 presents the resulting levels of service with implementation of the recommended measures.

Table 7-2: Future Background (Year 2034) + Project Conditions - Recommended Improvements

Intersection	Control Type	Future Background (Year 2034) + Project Conditions			
		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
4. Highway 395 / Mojave Drive	TS	47.7	D	72.2	E
No additional improvements beyond year 2024 recommendations are required.	TS	40.0	D	52.6	D



1 HIGHWAY 395 / CACTUS RD	
38/80 914/1549 74/51	66/40 110/51 105/83
9/21 96/29 84/53	357/145 693/1109 144/79

2 MESA LINDA AVE / CACTUS RD	
0/0 0/0 0/0	0/0 250/83 0/0
0/0 224/118 17/37	37/21 0/0 0/0

3 MESA LINDA AVE / MOJAVE DR	
10/33 0/0 25/86	35/14 793/846 42/59
43/19 710/880 33/56	71/54 0/0 46/40

4 HIGHWAY 395 / MOJAVE DR	
54/91 861/1291 193/312	334/265 442/524 98/144
37/58 431/492 178/139	166/146 819/1009 163/152

LEGEND

- XX/XX - AM/PM TRAFFIC VOLUMES
- # - STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH

8 FUTURE (YEAR 2044) CONDITIONS

This scenario represents conditions at a 20-year forecast planning horizon without traffic generated by the project. It is for informational purposes only because the City of Victorville does not use this long-range analysis scenario for conditioning project improvements.

Growth in traffic is from extrapolation of the 2040 San Bernardino County Transportation Analysis Model (SBTAM) model projections. Intersection turn movements were derived from post processing forecasted link approach volumes and balancing the turn movement volumes for each study intersection.

This scenario also includes traffic generated by planned and/or approved other area projects as identified by the City. The City identified two nearby approved projects to include in this cumulative analysis—a 64-unit residential development (Tentative Tract 20422), and a 1,057,300 SF warehouse with 40,000 SF office area (Mojave 68).

8.1 Future (Year 2044) Traffic Analysis

The Future (Year 2044) Scenario forecasted traffic volumes are illustrated in **Figure 13**. Intersection capacity analysis uses these traffic projections and the future lane geometries, including the approved mitigations for Mojave 68 Project. These geometrics are shown in **Figure 15**. The results of the analysis are shown in **Table 8-1** and provided in **Appendix C**.

Table 8-1: Intersection Capacity Analysis – Future (Year 2044) Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	38.6	D	20.0	C
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A	
3. Mojave Dr / Mesa Linda Ave	TS	25.9	C	26.8	C
4. Highway 395 / Mojave Dr	TS	68.5	E	117.0	F
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection					

As presented in **Table 8-1**, under Future (Year 2044) Conditions, the intersection of Highway 395 and Mojave Drive will operate at LOS E during the AM peak hour and LOS F during the PM peak hour. This is considered below the City's peak hour level of service standard. As a result, this intersection is identified as cumulative deficiencies occurring prior to the addition of project traffic.

9 FUTURE BACKGROUND (YEAR 2044) PLUS PROJECT CONDITIONS

9.1 Future Background (Year 2044) Plus Project Traffic Analysis

Table 9-1 compares the Future Year 2044 and Future Year 2044 + Project weekday peak hour levels of service. Year 2044 conditions represent a 20-year long range planning scenario which Caltrans requests be included in traffic impact studies. Forecasts for the year 2044 analysis scenario are derived from the San Bernardino Transportation Analysis Model (SBTAM).

The traffic volumes forecasted for this scenario are illustrated in **Figure 14**. Under Future Year 2044 Conditions,

When project traffic is added to the Future Year 2044, all of the study intersections remain at their LOS with slight increases in delay, except for the intersection of Highway 395 and Cactus Road during the PM peak hour, which worsens from LOS B to LOS C, but still within the City's LOS standards. The intersection of Highway 395 and Mojave Drive still operate at LOS F during the AM peak hour, with a slight increase in delay.

Table 9-1: Comparison of Future Year 2044 and Future Year 2044 + Project Intersection Level of Service

Intersection	Control Type	Future Conditions				Future + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Highway 395 / Cactus Rd	TS	38.6	D	20.0	C	41.4	D	26.0	C
2. Cactus Rd / Mesa Linda Ave (Future Intersection)	SSSC	N/A		N/A		13.3	B	11.4	B
3. Mojave Dr / Mesa Linda Ave	TS	25.9	C	26.8	C	26.7	C	27.3	C
4. Highway 395 / Mojave Dr	TS	68.5	E	117.0	F	71.7	E	120.9	F
Notes: Shaded cells in the table represent intersection peak hours with LOS deficiencies (LOS E or F). Capacity analysis is based on trucks converted to passenger car equivalents (PCE's) Abbreviations: Intersection control types: TS = traffic signal, SSSC= side-street stop-control, N/A = Not Applicable - Future Intersection									

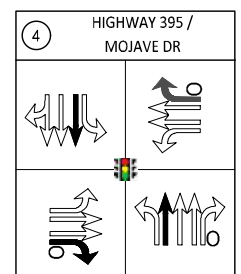
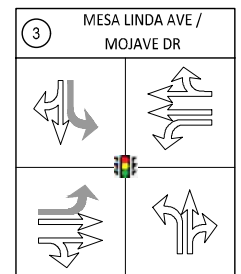
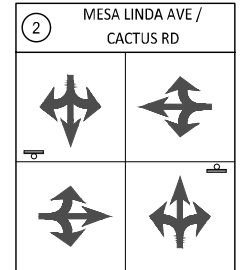
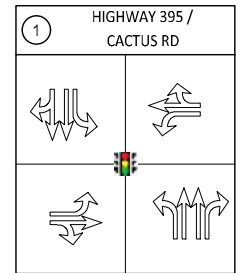
As presented in **Table 9-1**, under Future (Year 2044) Plus Project Conditions, all of the study intersections remain at their LOS with slight increases in delay, except for the intersection of Highway 395 and Mojave Drive. The intersection of Highway 395 and Mojave Drive is anticipated to operate at an LOS E during the AM peak hour and a LOS F during the PM peak hour.

9.2 Long-Term (Year 2044) Improvements – For Informational Purposes Only

Table 9-2 describes the improvements required to mitigate the deficient levels of service in the year 2044 plus the project. Since the City will not condition the project to improve long-range conditions, the improvements discussed in this section are for information purposes only.

Table 9-2: Future Year 2044 + Project Conditions - Recommended Improvements

Intersection	Control Type	Future + Project Conditions			
		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
4. Highway 395 / Mojave Drive	TS	71.7	E	120.9	F
Improvements: WB: Separate the shared through-right turn lane to a through lane and an exclusive right turn lane. Provide right turn overlap phasing. NB: Add one through lane. Provide right turn overlap phasing. EB: Separate the shared through-right turn lane to a through lane and an exclusive right turn lane. Provide right turn overlap phasing. SB: Add one through lane.	TS	44.1	D	52.9	D



LEGEND

- FUTURE PROJECT GEOMETRICS
- BACKGROUND PROJECT GEOMETRICS
- MITIGATIONS SPECIFIC TO MOJAVE 68 PROJECT
- EXISTING GEOMETRICS
- ① - STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH
- RIGHT TURN OVERLAP PHASING

10 APPENDICES

Appendix A: Approved City Scope Agreement

Appendix B: Turn Movement Count Volumes

Appendix C: Forecast Model Volume Development

Appendix D: Intersection Capacity Analysis Calculations

Appendix E: Other Area Projects: Tentative Tract 20422 and Mojave 68 Project

Appendix A: Approved City Scope Agreement



December 6, 2022

Job No. PIXI5AMG-0001

MEMORANDUM

To: Mr. Simon Bouzaglou
55555 Amargosa LLC
5901 South Eastern Avenue
Commerce, CA 90040

From: James M. Daisa, PE
Senior Transportation Project Manager



RE: SCOPING AGREEMENT FOR FOCUSED TRAFFIC IMPACT ANALYSIS AND VEHICLE MILES TRAVELED (VMT) SCREENING FOR PROPOSED WAREHOUSE SITE LOCATED AT THE SOUTHWEST CORNER OF CACTUS ROAD AND MESA LINDA AVENUE IN VICTORVILLE (APNS: 3128-581-05 THRU 06)

This memorandum presents key elements of the scope of work for the Focused Traffic Impact Analysis Report (TIA Report) evaluating the above referenced development project. It is standard practice for the City of Victorville to review and approve the scope of the TIA and other key information, which is to include proposed assumptions and methodologies, estimated project trip generation, distribution of project trips to proposed study intersections, and scenarios and timeframes to be analyzed in the study.

In addition to establishing the scope of the focused traffic study, this memorandum includes a screening assessment to determine if a Vehicle Miles Traveled (VMT) analysis to identify potential transportation impacts for CEQA clearance is required of the project. The screening assessment is based on Victorville's adopted criteria for exempting development projects from having to conduct a VMT analysis as defined in the Resolution No. P-20-010 *Vehicle Miles Traveled (VMT) Analysis Guidelines* adopted by the city in May of 2020.

A. Project Description

The project site is located on the southwest corner of the intersection of Cactus Road and Mesa Linda Avenue in the City of Victorville, as illustrated in **Exhibit A**. The proposed project is to construct 405,889 square feet of warehousing. The single warehouse building is comprised of 392,535 square feet of warehouse and 13,354 square feet of office on the first floor and in a 2nd floor mezzanine level. The warehouse includes 79 loading docks on the south side of the building within a secure gated yard, 209 automobile parking spaces in a parking lot on the north side of the building, and 99 truck/ trailer parking spaces against the southern boundary of the project.

The proposed project is bounded to the north by Cactus Road, to the south and east by vacant/undeveloped properties, and to the west by unimproved Mesa Linda Avenue and vacant/undeveloped properties. **Exhibit B** illustrates the proposed site plan.

Circulation Improvements and Site Access

Access to the site will be from driveways proposed on Cactus Road, Mesa Linda Avenue, and Cantina Road. Currently, these three streets are unimproved roads. The project's proposed circulation and access plan includes extending and constructing the southern half of Cactus Road from end of its improved section (about 360 feet east of Highway 395) to Mesa Linda Avenue; constructing the western half of Mesa Linda Avenue from Cactus Road to the southern edge of the property; and constructing the eastern half of Cantina Road from Cactus Road to the southern edge of the property.

If no other development in the vicinity constructs the remaining half widths of Cactus Road, Mesa Linda Avenue or Cantina Road prior to the opening of the proposed project, the project will construct an additional travel lane to allow for two-way traffic on each street.

Three commercial driveways are proposed on Cactus Road accessing the site's surface automobile parking and, indirectly, internal roads on the western and eastern sides of the building that access the gated loading area on the southern side of the building. Primary truck access to the secure gated loading dock and truck/trailer parking area is provided by a commercial driveway on Cantina Road (approximately 506 feet south of Cactus Road (measured from curb face to curb face) and a commercial driveway on Mesa Linda Avenue located the same distance from Cactus Road as shown in **Exhibit B**.

The internal gates securing the loading dock and truck / trailer parking area of the site are setback from Cantina Road and Mesa Linda Road by about 94 feet—enough space for a single interstate truck/trailer combination. The TIA will estimate the queuing of these primary truck entrances using industry standard gate processing times to determine the potential for queue spill backs onto the adjacent streets.

B. Project Trip Generation

The proposed project is a speculative warehouse where the specific tenant(s) and function are unknown. While the impact analysis needs to reflect a reasonable spectrum of tenant types, there is a risk when estimating trip generation of over or under-estimating traffic. The 11th Edition of the Institute of Transportation Engineers' Trip Generation manual contains data for the most common types of warehouse operations with a wide range of rates. **Table A** summarizes the trip generation rates for warehouse facilities in the current edition of ITE's Trip Generation.

Table A: Trip Generation Rates for ITE Land Use Categories of Warehousing

Warehouse Type	ITE Land Use Code	Average Trip Generation Rates for Warehouse Types (Trips Per KSF) (Source: ITE Trip Generation 11th Edition)		
		Average Daily Traffic	AM Peak Hour of Adjacent Street Traffic	PM Peak Hour of Adjacent Street Traffic
		Total (In + Out)	Total (In + Out)	Total (In + Out)
High-Cube Transload and Short-Term Storage Warehouse	154	1.54	0.08	0.10
High-Cube Cold Storage Warehouse	157	2.12	0.11	0.12
High-Cube Fulfillment Center Warehouse - Non-Sort	155	1.81	0.15	0.16
General Warehouse	150	1.71	0.17	0.18
High-Cube Parcel Hub Warehouse	156	4.63	0.70	0.64
High-Cube Fulfillment Center Warehouse - Sort	155	6.44	0.87	1.20
Average of All Warehouse Types		3.04	0.35	0.40
Average Without High-Cube Sort Fulfillment Center		2.36	0.24	0.24

To help select a trip generation rate for the proposed project representative of the range of potential tenants / warehouse functions, **Table A** includes the average of the rates for all warehouse types in the ITE Trip Generation manual and the average of the rates for all warehouse types except High-Cube Fulfillment Sort Facility—the most intensive type of warehouse. The secondary average rate (excluding High-Cube Fulfillment Sort Facility) represents two thirds of the ITE warehouse types and covers a broad range of tenant types and operations.

Table B summarizes the estimated trip generation of the proposed project for an average weekday, and weekday AM (7-9 AM) and PM (4-6 PM) peak hours, based on the secondary average rates identified in **Table A**. The proposed warehouse would generate about 958 vehicle trips per day and 99 vehicle trips in both the AM and PM peak hours.

Table B: Cactus Industrial Warehouse Project Trip Generation

Land Use	Gross Floor Area (KSF)	Daily	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			In	Out	Total	In	Out	Total
Warehouse (ITE Land Use Category 150)	405.89	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
		2.36	0.18	0.06	0.24	0.07	0.17	0.24
		Total Vehicle Trip Generation						
		958	76	23	99	28	71	99
	Mode Share	Project Trip Generation by Vehicle Type						
Passenger Cars (Percent of Total)	74.21%	711	56	17	73	21	53	73
2-Axle Trucks (Percent of Total)	4.55%	44	3	1	4	1	3	4
3-Axle Trucks (Percent of Total)	4.18%	40	3	1	4	1	3	4
4-Axle Trucks (Percent of Total)	17.04%	163	13	4	17	5	12	17
	PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
Passenger Cars)	1.0	711	56	17	73	21	53	73
2-Axle Trucks	1.5	65	5	2	7	2	5	7
3-Axle Trucks	2.0	80	6	2	8	2	6	8
4 + Axle Trucks	3.0	490	39	12	50	15	36	50
Total Passenger Car Equivalents (PCE)		1,346	106	33	139	40	100	140
Notes: KSF = Thousands of Square Feet. AM / PM Peak Hour of Adjacent Street Traffic = trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods. Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition). Source of passenger car / truck mode share (percentage of total): South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2016). Based on data from eight high cube warehouses in the Inland Empire over 1,000,000 square feet in size. The average warehouse building size in the study was 1,364,496 square feet. Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions.								

For truck intensive land uses it is standard practice to convert trips to passenger car equivalents (PCEs) for intersection capacity analysis. This conversion reflects the effects of large vehicles on intersection operations both from the physical space a truck occupies but also from their effect on the intersection's saturation flow rate due to the slower acceleration of trucks. When converted to PCEs, the proposed project generates about 1,346 daily PCEs, with 139 PCEs in the AM peak hour and 140 PCE's in the PM peak hour.

C. Study Intersections

The focused traffic study proposes to evaluate key intersections on routes expected to be used by project traffic to access the site. **Exhibit C** and the list below identify the intersections proposed for inclusion in the study.

1. Highway 395 / Cactus Rd
2. Mesa Linda Ave / Cactus Ave (future intersection)
3. Mesa Linda Ave / Mojave Drive
4. Highway 395 / Mojave Drive

The intersections of Highway 395 at Cactus Road and Mojave Drive are signalized. The intersection of Mesa Linda Avenue and Mojave Drive is currently side-street stop controlled for the existing south leg of the intersection.

D. Project Trip Distribution and Assignment

To address the impacts of the estimated project traffic, project trips are distributed by direction towards major commute routes, truck routes, freight haul corridors, and concentrations of residential and commercial / employment centers. Truck trips are distributed specifically to truck routes designated in Victorville's General Plan, the nearest of which includes Mojave Drive connecting I-15 to Highway 395. Highway 395, as a state

highway, is also a designated truck route by the State of California. Once the distribution pattern is established, project trips are assigned to the streets that provide the most direct route to destinations.

The distribution of the automobile trips (employees/visitors) is illustrated in **Exhibit D1**. The distribution of truck trips is illustrated in **Exhibit D2**. **The distribution of project trips assumes the construction of Mesa Linda Avenue from Cactus Road to Mojave Drive through a combination of improvements by the proposed project and other proposed development in the area.**

Exhibit E shows the assignment of total project trips (automobile plus trucks in passenger car equivalents) to proposed study intersections.

E. Level of Service Standard and Analysis Methodology

Victorville's general plan Policy 1.1.1 states "Maintain LOS D or better at intersections (as defined in the most current version of the Highway Capacity Manual)".

Level of service will be calculated using the Highway Capacity Manual (HCM6) methodologies for signalized and non-signalized intersections. All study intersections will be analyzed to identify deficiencies in the city's Level of Service (LOS) policy. The capacity analysis will represent trucks in passenger car equivalents (PCE) in the existing and projected peak hour traffic volumes.

Mitigation Measures

If a study intersection is found to operate with a LOS deficiency under any "with project" scenario, improvements will be identified to accomplish the following:

- If the addition of project traffic causes the level of service to change from a LOS D or better in the "without project" condition to a LOS E or F, the improvement should return the level of service to a LOS D or better. In future conditions, the deficiency described above is a "cumulative" impact and the study will include the project's fair-share contribution to the impact (and the cost to mitigate the deficiency).
- If an intersection is operating at a deficient LOS E or F in the "without project" condition and the project adds traffic to the intersection that increases the average delay, the improvement should, at a minimum, offset the project's increase in delay. In near-term and future conditions, the deficiency described above is a "cumulative" impact and the study will include the project's fair-share contribution to the impact (and the cost to mitigate the deficiency).

Signal Warrant Analysis

Signal warrant analyses (CA MUTCD Warrant #3 - Peak Hour) will be conducted at the non-signalized intersections if they are found to operate at LOS E or LOS F in any scenario.

F. Traffic Study Scenarios

Scenarios analyzed in this study are consistent with City of Victorville, San Bernardino County Congestion Management Program (CMP), and Caltrans requirements for analysis scenarios which include:

1. Existing Conditions (AM (7-9 AM) and PM (4-6 PM) peak hours)
2. Background Conditions (Year 2024)
 - a. Ambient growth (assuming a growth rate of 3.5% per year per city guidelines)
 - b. Planned and approved (but not yet built) development in the vicinity of the project
3. Background + Project Conditions (Year 2024)
 - a. Background conditions as defined above + project traffic
4. Future Horizon Year 2034 Without Project Conditions
 - a. Background + ambient growth (assuming a growth rate of 3.5% per year per city guidelines)
5. Future Horizon Year 2034 + Project
 - a. Future horizon year 2034 conditions + project traffic

6. Future Year (2044) Without Project Conditions (Caltrans required 20-year projections)
 - a. Extrapolated from year 2040 SBTAM model projections
7. Future Year (2044) + Project Conditions
 - a. Future year (2044) conditions as defined above + project traffic

G. Vehicle Miles Traveled (VMT) Screening

The following is a screening assessment of the project based on criteria in the City of Victorville's Resolution No. P-20-010 *Vehicle Miles Traveled (VMT) Analysis Guidelines* adopted by the city in May of 2020.

Project Screening from Conducting VMT Analyses

Victorville uses screening criteria to determine if a development project is required to conduct a VMT analysis to identify potentially significant transportation impacts under CEQA. If a project satisfies one the criteria described below it is considered to have a less than significant impact on VMT and does not require a VMT analysis.

Victorville has two criteria for screening projects from requiring a VMT analysis. The first criterion is based on the project's net daily increase in vehicle trips—if the project's net daily traffic generation is equal to or less than the city's threshold of 1,285 trips per day, it is exempt from conducting a VMT analysis.

The second criterion (Land Use Types) identifies specific types of land uses with a maximum size threshold in terms of dwelling units for residential projects and floor area for non-residential projects. The listed types of land uses, if within the size threshold, are deemed to generate annual levels of greenhouses gas emissions less than the air quality management district's threshold or the land uses are "locally-serving" uses that reduce VMT by providing nearby opportunities for employment, shopping, and services. Proposed development matching the land use type and falling within the size threshold is exempt from having to conduct a VMT analysis.

1. Screening for Net Increase in Daily Vehicle Trips

As shown in **Table B**, the project's net increase in daily trips is about 958 trips which is under the threshold of 1,285 daily trips established in the city's guidelines. Based on this criterion, the project is screened from requiring a VMT analysis.

2. Land Use Type Screening

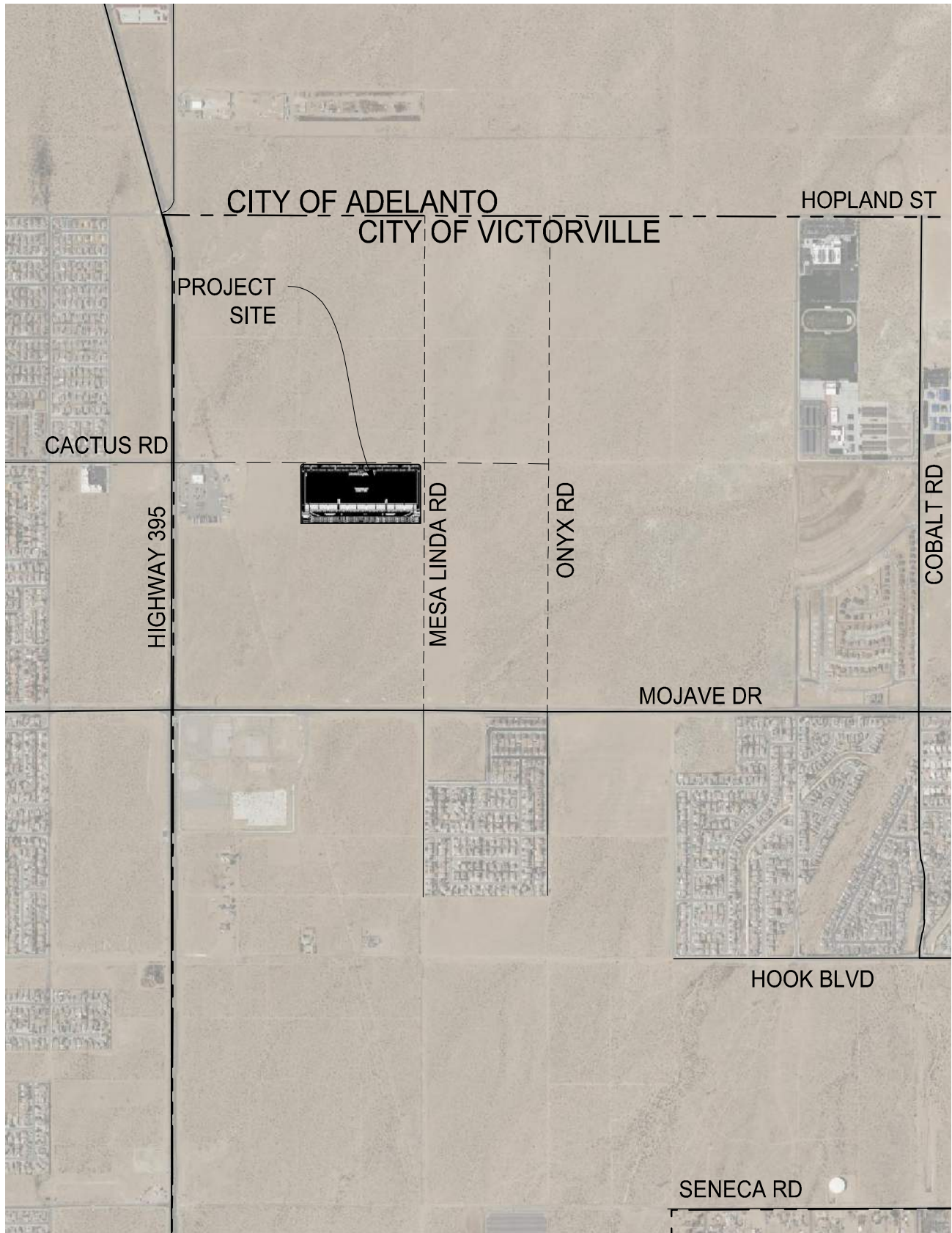
The proposed project is comprised of warehousing with a total floor area of 405,889 square feet which is less than the city's threshold of 829,000 square feet for warehousing. Based on this criterion, the project is screened from being required to conduct a VMT analysis.

3. VMT Screening Conclusion

The proposed project satisfies the city's two screening criteria and therefore is not required to prepare a VMT analysis to identify potentially significant impacts under CEQA.

Attachments:

1. Exhibit A – Vicinity Map
2. Exhibit B – Site Plan
3. Exhibit C – Study Intersections
4. Exhibit D1 – Project Automobile Trip Distribution
5. Exhibit D2 – Project Truck Trip Distribution
6. Exhibit E – Total Project Trips



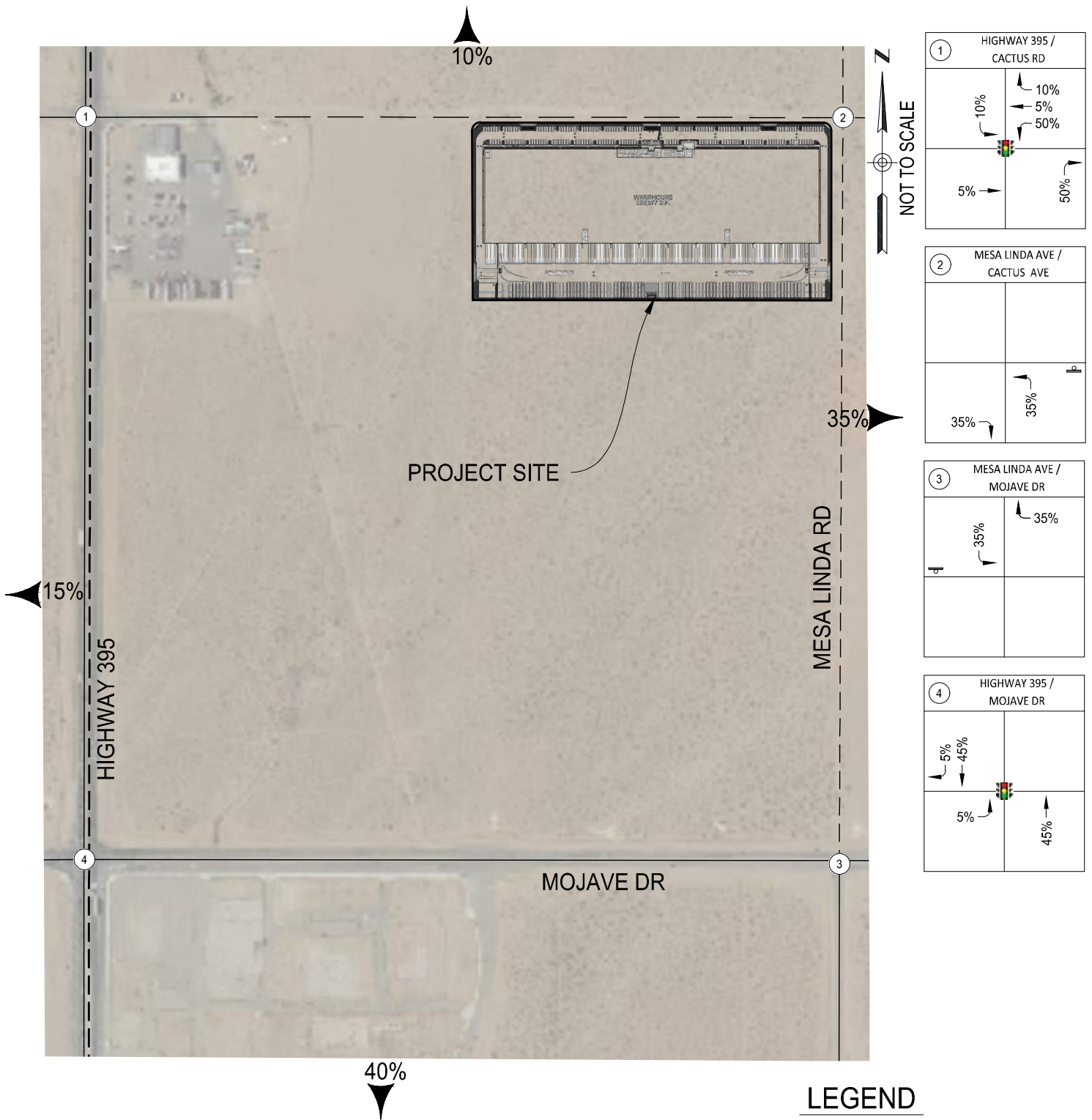
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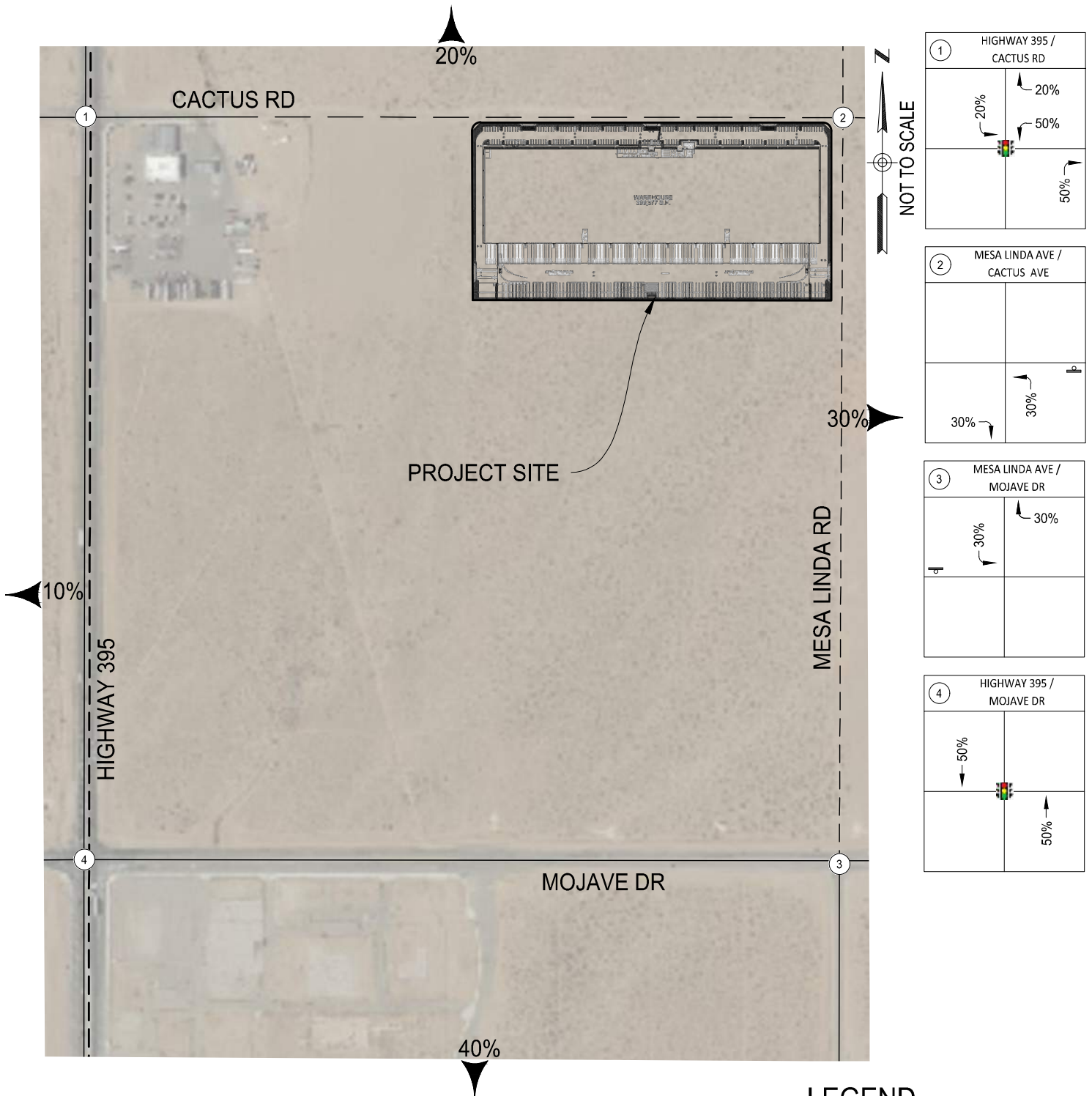


EXHIBIT A: VICINITY MAP
 PROPOSED CACTUS WAREHOUSE
 VICTORVILLE, CALIFORNIA



EXHIBIT B: SITE PLAN
PROPOSED CACTUS WAREHOUSE
VICTORVILLE, CALIFORNIA





LEGEND

- XX% - GENERAL PROJECT TRIP DISTRIBUTION
- XX% - SPECIFIC PROJECT TRIP PERCENTAGE
- # - STUDY INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP CONTROLLED APPROACH

Appendix B: Turn Movement Count Volumes

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: HWY 395
 EAST-WEST STREET: CACTUS RD
 JURISDICTION: VICTORVILLE

DATE: 12-15-22

PEAK HOUR: 07:45AM

NORTH LEG

TOTAL: 576

27	532	17
4	131	4
6	144	5
10	135	3
7	122	5

Total

1st

2nd

3rd

4th

Rt Thru Lt

EAST LEG TOTAL: 135

Rt	4	5	5	9	23
Thru	15	21	16	19	71
Lt	8	11	12	10	41

1st 2nd 3rd 4th Total

Total 1st 2nd 3rd 4th

5	1	2	2	0
66	11	21	20	14
59	15	18	11	15

Lt

Thru

Rt

WEST LEG TOTAL: 130

PEAK HOUR FACTORS

NORTH LEG = 0.93

SOUTH LEG = 0.92

EAST LEG = 0.89

WEST LEG = 0.79

ALL LEGS = 0.91

	Lt	Thru	Rt
1st	63	99	5
2nd	66	106	11
3rd	59	100	6
4th	55	93	9
Total	243	398	31

TOTAL: 672

SOUTH LEG

HOOR TOTAL: 1,513

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : HWY 395
 EAST-WEST STREET : CACTUS RD
 BEGINNING TIME : 07:00AM

VICTORVILLE
 12-15-22

AUTOS			LARGE 2 AXLE			3 AXLE			4 (+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
3	78	0	0	1	0	0	3	0	0	3	0	88
5	92	2	0	1	0	0	2	0	0	5	1	108
2	99	0	1	0	1	0	1	0	0	5	1	110
4	113	1	0	2	0	0	2	0	0	14	3	139
6	132	3	0	1	0	0	1	0	0	10	2	155
10	119	0	0	1	1	0	0	0	0	15	2	148
7	111	2	0	0	1	0	1	0	0	10	2	134
7	96	3	0	2	0	0	1	0	0	12	1	122
44	840	11	1	8	3	0	11	0	0	74	12	1004
SOUTH LEG												
2	58	33	0	2	0	0	1	0	1	3	0	100
2	57	49	2	1	0	0	2	0	2	3	0	118
2	70	56	0	0	1	3	3	0	1	15	0	151
2	85	63	1	3	0	0	1	0	2	10	0	167
5	94	66	2	2	0	1	1	0	3	9	0	183
3	88	59	0	1	0	1	2	0	2	9	0	165
8	88	55	1	0	0	0	0	0	0	5	0	157
4	68	50	0	1	0	0	1	0	1	11	0	136
28	608	431	6	10	1	5	11	0	12	65	0	1177
EAST LEG												
0	5	1	0	0	0	0	1	1	0	0	3	11
2	10	3	0	0	1	0	0	0	1	0	3	20
0	14	2	0	1	1	1	0	2	2	0	4	27
1	14	5	0	1	1	0	0	0	3	0	2	27
1	21	8	1	0	0	1	0	1	2	0	2	37
4	16	11	0	0	0	0	0	0	1	0	1	33
4	19	6	1	0	0	1	0	0	3	0	4	38
4	13	6	0	0	2	0	0	0	2	0	2	29
16	112	42	2	2	5	3	1	4	14	0	21	222
WEST LEG												
10	10	0	0	0	0	0	0	0	0	0	0	20
14	17	1	0	2	0	0	0	0	0	0	0	34
14	14	1	2	0	0	0	2	0	1	0	0	34
15	11	0	0	0	0	0	0	1	0	0	0	27
18	21	0	0	0	2	0	0	0	0	0	0	41
11	20	2	0	0	0	0	0	0	0	0	0	33
15	14	0	0	0	0	0	0	0	0	0	0	29
14	11	3	0	0	0	0	0	0	0	0	0	28
111	118	7	2	2	2	0	2	1	1	0	0	246

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: CACTUS RD

TIME: 07:00AM-08:00AM

DATE: 12-15-22

NORTH LEG

15	421	9	Total
3	85	0	1st
5	100	3	2nd
3	105	2	3rd
4	131	4	4th
Rt	Thru	Lt	

Total 1st 2nd 3rd 4th

3	0	1	1	1	Lt
56	10	19	16	11	Thru
56	10	14	17	15	Rt

Rt	0	3	3	4	10
Thru	6	10	15	15	46
Lt	5	7	9	8	29
	1st	2nd	3rd	4th	Total

Lt Thru Rt

1st	33	64	3
2nd	49	63	6
3rd	57	88	6
4th	63	99	5
Total	202	314	20

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: CACTUS RD

TIME: 08:00AM-09:00AM

DATE: 12-15-22

NORTH LEG

30	512	17	Total
6	144	5	1st
10	135	3	2nd
7	122	5	3rd
7	111	4	4th
Rt	Thru	Lt	

Rt	5	5	9	6	25
Thru	21	16	19	13	69
Lt	11	12	10	10	43
	1st	2nd	3rd	4th	Total

Total 1st 2nd 3rd 4th

7	2	2	0	3	Lt
66	21	20	14	11	Thru
58	18	11	15	14	Rt

	Lt	Thru	Rt
1st	66	106	11
2nd	59	100	6
3rd	55	93	9
4th	50	81	5
Total	230	380	31

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: HWY 395
EAST-WEST STREET: CACTUS RD
JURISDICTION: VICTORVILLE

DATE: 12-15-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 1,082

	56	1014	12	Total
1st	18	263	2	1st
2nd	12	244	2	2nd
3rd	15	266	3	3rd
4th	11	241	5	4th
	Rt	Thru	Lt	

EAST LEG TOTAL: 40

Rt	2	2	3	3	10
Thru	5	5	4	7	21
Lt	2	1	3	3	9
	1st	2nd	3rd	4th	Total

Total 1st 2nd 3rd 4th

14	3	2	5	4	Lt
19	0	5	7	7	Thru
34	7	7	11	9	Rt

WEST LEG TOTAL: 67

PEAK HOUR FACTORS

NORTH LEG = 0.95
SOUTH LEG = 0.93
EAST LEG = 0.77
WEST LEG = 0.73
ALL LEGS = 0.94

	Lt	Thru	Rt
1st	23	170	2
2nd	25	161	3
3rd	29	188	4
4th	22	193	4
Total	99	712	13

TOTAL: 824

SOUTH LEG

HOURLY TOTAL: 2,013

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : HWY 395
 EAST-WEST STREET : CACTUS RD
 BEGINNING TIME : 04:00PM

VICTORVILLE
 12-15-22

AUTOS			LARGE 2 AXLE			3 AXLE			4 (+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
6	226	0	0	2	0	0	2	0	0	3	2	241
6	247	0	0	1	1	0	0	2	0	3	0	260
18	256	0	0	1	0	0	1	0	0	5	2	283
12	238	0	0	0	0	0	1	0	0	5	2	258
15	259	0	0	3	2	0	1	0	0	3	1	284
11	231	2	0	2	0	0	0	0	0	8	3	257
14	210	1	0	1	2	0	3	0	0	7	0	238
10	216	0	0	3	1	0	1	0	0	5	1	237
92	1883	3	0	13	6	0	9	2	0	39	11	2058
SOUTH LEG												
2	130	22	0	2	0	1	2	0	0	6	0	165
2	164	25	0	2	0	0	0	1	0	5	0	199
1	162	23	0	0	0	0	3	0	1	5	0	195
0	148	23	0	2	0	2	1	2	1	10	0	189
1	179	29	0	4	0	0	1	0	3	4	0	221
0	187	22	0	1	0	0	1	0	4	4	0	219
0	160	24	0	1	0	0	0	0	2	8	0	195
2	156	21	0	1	0	1	3	0	0	6	0	190
8	1286	189	0	13	0	4	11	3	11	48	0	1573
EAST LEG												
0	1	0	0	1	1	0	0	0	1	0	0	4
0	3	0	0	0	1	2	0	0	1	0	1	8
1	5	0	0	0	0	0	0	1	1	0	1	9
0	5	0	1	0	0	1	0	1	0	0	0	8
2	2	2	1	2	0	0	0	0	0	0	1	10
2	7	0	0	0	2	1	0	0	0	0	1	13
3	3	0	0	0	0	0	0	0	2	0	2	10
0	4	1	0	0	0	0	0	0	1	0	1	7
8	30	3	2	3	4	4	0	2	6	0	7	69
WEST LEG												
6	2	2	0	0	0	0	0	2	0	0	0	12
9	3	4	0	0	0	0	0	0	0	0	0	16
7	0	2	0	0	1	0	0	0	0	0	0	10
5	5	2	1	0	0	1	0	0	0	0	0	14
11	7	5	0	0	0	0	0	0	0	0	0	23
9	7	4	0	0	0	0	0	0	0	0	0	20
6	2	1	0	1	0	0	0	1	0	0	0	11
7	0	2	0	2	0	0	0	0	0	0	0	11
60	26	22	1	3	1	1	0	3	0	0	0	117

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: CACTUS RD

TIME: 04:00PM-05:00PM

DATE: 12-15-22

NORTH LEG

42	991	9	Total
6	233	2	1st
6	251	3	2nd
18	263	2	3rd
12	244	2	4th
Rt	Thru	Lt	

Rt	1	3	2	2	8
Thru	2	3	5	5	15
Lt	1	2	2	1	6
	1st	2nd	3rd	4th	Total

Total 1st 2nd 3rd 4th

13	4	4	3	2	Lt
10	2	3	0	5	Thru
29	6	9	7	7	Rt

	Lt	Thru	Rt
1st	22	140	3
2nd	26	171	2
3rd	23	170	2
4th	25	161	3
Total	96	642	10

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: CACTUS RD

TIME: 05:00PM-06:00PM

DATE: 12-15-22

NORTH LEG

50	953	13	Total
15	266	3	1st
11	241	5	2nd
14	221	3	3rd
10	225	2	4th
Rt	Thru	Lt	

Total 1st 2nd 3rd 4th

13	5	4	2	2	Lt
19	7	7	3	2	Thru
33	11	9	6	7	Rt

Rt	3	3	5	1	12
Thru	4	7	3	4	18
Lt	3	3	2	2	10
	1st	2nd	3rd	4th	Total

	Lt	Thru	Rt
1st	29	188	4
2nd	22	193	4
3rd	24	169	2
4th	21	166	3
Total	96	716	13

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: MESA LINDA AVE

EAST-WEST STREET: MOJAVE DR

JURISDICTION: VICTORVILLE

DATE: 12-15-22

PEAK HOUR: 07:30AM

NORTH LEG

TOTAL: 0

Total

1st

2nd

3rd

4th

Rt Thru Lt

EAST LEG TOTAL: 555

Rt					
Thru	133	125	135	136	529
Lt	6	10	5	5	26

1st 2nd 3rd 4th Total

Total 1st 2nd 3rd 4th

484	109	123	137	115
18	5	8	0	5

Lt

Thru

Rt

WEST LEG TOTAL: 502

PEAK HOUR FACTORS

NORTH LEG =

SOUTH LEG = 0.69

EAST LEG = 0.98

WEST LEG = 0.92

ALL LEGS = 0.93

	Lt	Thru	Rt
1st	5		10
2nd	12		6
3rd	15		10
4th	6		5
Total	38		31

SOUTH LEG

TOTAL: 69

HOUR TOTAL: 1,126

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY
 NORTH-SOUTH STREET : MESA LINDA AVE
 EAST-WEST STREET : MOJAVE DR
 BEGINNING TIME : 07:00AM

VICTORVILLE
 12-15-22

AUTOS			LARGE 2 AXLE			3 AXLE			4 (+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH LEG												
6	0	6	0	0	0	0	0	0	0	0	0	12
6	0	10	0	0	0	0	0	0	0	0	0	16
10	0	5	0	0	0	0	0	0	0	0	0	15
6	0	12	0	0	0	0	0	0	0	0	0	18
10	0	15	0	0	0	0	0	0	0	0	0	25
5	0	6	0	0	0	0	0	0	0	0	0	11
5	0	10	0	0	0	0	0	0	0	0	0	15
6	0	8	0	0	0	0	0	0	0	0	0	14
54	0	72	0	0	0	0	0	0	0	0	0	126
EAST LEG												
0	102	0	0	3	0	0	1	0	0	0	0	106
0	114	6	0	3	0	0	1	0	0	0	0	124
0	130	6	0	2	0	0	1	0	0	0	0	139
0	116	10	0	3	0	0	6	0	0	0	0	135
0	129	5	0	2	0	0	2	0	0	2	0	140
0	134	5	0	2	0	0	0	0	0	0	0	141
0	118	13	0	1	0	0	1	0	0	0	0	133
0	117	6	0	2	0	0	1	0	0	0	0	126
0	960	51	0	18	0	0	13	0	0	2	0	1044
WEST LEG												
0	102	0	0	0	0	0	3	0	0	0	0	105
2	105	0	0	3	0	0	3	0	0	0	0	113
5	104	0	0	1	0	0	3	0	0	1	0	114
7	118	0	1	3	0	0	2	0	0	0	0	131
0	134	0	0	1	0	0	2	0	0	0	0	137
5	109	0	0	3	0	0	3	0	0	0	0	120
6	103	0	0	1	0	0	1	0	0	0	0	111
3	97	0	2	2	0	0	0	0	0	0	0	104
28	872	0	3	14	0	0	17	0	0	1	0	935

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: MESA LINDA AVE

EAST-WEST STREET: MOJAVE DR

TIME: 07:00AM-08:00AM

DATE: 12-15-22

NORTH LEG

Total

1st

2nd

3rd

4th

Rt Thru Lt

Total 1st 2nd 3rd 4th

448	105	111	109	123
15	0	2	5	8

Lt

Thru

Rt

Rt					
Thru	106	118	133	125	482
Lt	0	6	6	10	22

1st 2nd 3rd 4th Total

Lt Thru Rt

1st	6		6
2nd	10		6
3rd	5		10
4th	12		6
Total	33		28

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: MESA LINDA AVE

EAST-WEST STREET: MOJAVE DR

TIME: 08:00AM-09:00AM

DATE: 12-15-22

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

Total 1st 2nd 3rd 4th

					Lt
456	137	115	105	99	Thru
16	0	5	6	5	Rt

Rt					
Thru	135	136	120	120	511
Lt	5	5	13	6	29
	1st	2nd	3rd	4th	Total

	Lt	Thru	Rt
1st	15		10
2nd	6		5
3rd	10		5
4th	8		6
Total	39		26

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: MESA LINDA AVE

EAST-WEST STREET: MOJAVE DR

JURISDICTION: VICTORVILLE

DATE: 12-15-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 0

Total

1st

2nd

3rd

4th

Rt Thru Lt

EAST LEG TOTAL: 595

Rt					
Thru	141	140	151	133	565
Lt	11	8	5	6	30

1st 2nd 3rd 4th Total

Total 1st 2nd 3rd 4th

610	144	151	160	155
29	11	7	6	5

Lt

Thru

Rt

WEST LEG TOTAL: 639

PEAK HOUR FACTORS

NORTH LEG =

SOUTH LEG = 0.78

EAST LEG = 0.95

WEST LEG = 0.96

ALL LEGS = 0.96

Lt Thru Rt

1st	10		5
2nd	5		6
3rd	6		8
4th	11		8
Total	32		27

TOTAL: 59

SOUTH LEG

HOURLY TOTAL: 1,293

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY
 NORTH-SOUTH STREET : MESA LINDA AVE
 EAST-WEST STREET : MOJAVE DR
 BEGINNING TIME : 04:00PM

VICTORVILLE

12-15-22

AUTOS			LARGE 2 AXLE			3 AXLE			4 (+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH LEG												
3	0	5	0	0	0	0	0	0	0	0	0	8
3	0	6	0	0	0	0	0	0	0	0	0	9
5	0	10	0	0	0	0	0	0	0	0	0	15
6	0	5	0	0	0	0	0	0	0	0	0	11
8	0	6	0	0	0	0	0	0	0	0	0	14
8	0	11	0	0	0	0	0	0	0	0	0	19
5	0	9	0	0	0	0	0	0	0	0	0	14
3	0	4	0	0	0	0	0	0	0	0	0	7
41	0	56	0	0	0	0	0	0	0	0	0	97
EAST LEG												
0	123	6	0	1	0	0	0	0	0	1	0	131
0	137	10	0	2	0	0	1	0	0	0	0	150
0	139	11	0	1	0	0	1	0	0	0	0	152
0	136	8	0	2	0	0	2	0	0	0	0	148
0	148	5	0	1	0	0	2	0	0	0	0	156
0	131	6	0	1	0	0	1	0	0	0	0	139
0	134	6	0	1	0	0	0	0	0	0	0	141
0	122	6	0	2	0	0	2	0	0	0	0	132
0	1070	58	0	11	0	0	9	0	0	1	0	1149
WEST LEG												
5	140	0	0	3	0	0	0	0	0	0	0	148
8	139	0	0	2	0	0	4	0	0	0	0	153
11	142	0	0	0	0	0	2	0	0	0	0	155
7	148	0	0	3	0	0	0	0	0	0	0	158
6	158	0	0	2	0	0	0	0	0	0	0	166
5	154	0	0	0	0	0	1	0	0	0	0	160
5	126	0	0	2	0	0	3	0	0	0	0	136
8	121	0	0	1	0	0	3	0	0	0	0	133
55	1128	0	0	13	0	0	13	0	0	0	0	1209

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: MESA LINDA AVE

EAST-WEST STREET: MOJAVE DR

TIME: 04:00PM-05:00PM

DATE: 12-15-22

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

Total 1st 2nd 3rd 4th

					Lt
583	143	145	144	151	Thru
31	5	8	11	7	Rt

Rt					
Thru	125	140	141	140	546
Lt	6	10	11	8	35
	1st	2nd	3rd	4th	Total

	Lt	Thru	Rt
1st	5		3
2nd	6		3
3rd	10		5
4th	5		6
Total	26		17

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: MESA LINDA AVE

EAST-WEST STREET: MOJAVE DR

TIME: 05:00PM-06:00PM

DATE: 12-15-22

NORTH LEG

			Total
			1st
			2nd
			3rd
			4th
Rt	Thru	Lt	

Total 1st 2nd 3rd 4th

					Lt
571	160	155	131	125	Thru
24	6	5	5	8	Rt

Rt					
Thru	151	133	135	126	545
Lt	5	6	6	6	23
	1st	2nd	3rd	4th	Total

	Lt	Thru	Rt
1st	6		8
2nd	11		8
3rd	9		5
4th	4		3
Total	30		24

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: HWY 395
 EAST-WEST STREET: MOJAVE DR
 JURISDICTION: VICTORVILLE

DATE: 12-15-22

PEAK HOUR: 07:45AM

NORTH LEG

TOTAL: 635

36	475	124
4	119	33
14	123	35
8	122	30
10	111	26

Total

1st

2nd

3rd

4th

Rt Thru Lt

EAST LEG TOTAL: 560

Rt

Thru

Lt

48	55	51	50	204
75	81	77	69	302
13	16	15	10	54

1st 2nd 3rd 4th Total

Total 1st 2nd 3rd 4th

22	5	6	6	5
286	73	77	70	66
125	31	35	33	26

Lt

Thru

Rt

WEST LEG TOTAL: 433

PEAK HOUR FACTORS

NORTH LEG = 0.92

SOUTH LEG = 0.92

EAST LEG = 0.92

WEST LEG = 0.92

ALL LEGS = 0.92

Lt Thru Rt

1st

2nd

3rd

4th

Total

25	111	23
29	121	27
31	116	20
30	100	20
115	448	90

TOTAL: 653

SOUTH LEG

HOURLY TOTAL: 2,281

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY
 NORTH-SOUTH STREET : HWY 395
 EAST-WEST STREET : MOJAVE DR
 BEGINNING TIME : 07:00AM

VICTORVILLE
 12-15-22

AUTOS			LARGE 2 AXLE			3 AXLE			4 (+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
2	54	31	0	1	0	0	4	0	0	6	0	98
0	81	27	0	1	1	0	0	2	0	8	0	120
0	93	26	2	0	1	1	1	0	0	9	0	133
3	100	32	0	3	0	1	0	1	0	16	0	156
14	110	33	0	1	0	0	0	2	0	12	0	172
7	106	30	1	0	0	0	0	0	0	16	0	160
9	97	26	0	0	0	1	0	0	0	14	0	147
10	78	27	0	3	1	0	1	0	0	14	0	134
45	719	232	3	9	3	3	6	5	0	95	0	1120
SOUTH LEG												
14	55	16	0	0	0	1	1	0	0	4	0	91
8	64	20	1	2	1	1	2	2	0	5	0	106
18	74	20	0	1	0	1	5	0	0	16	0	135
22	96	24	1	2	0	0	1	1	0	12	0	159
26	105	29	1	4	0	0	0	0	0	12	0	177
19	102	31	1	0	0	0	3	0	0	11	0	167
19	94	28	0	1	2	1	0	0	0	5	0	150
12	69	22	3	1	1	0	1	0	0	12	0	121
138	659	190	7	11	4	4	13	3	0	77	0	1106
EAST LEG												
39	58	10	2	1	0	0	0	1	0	0	0	111
39	70	14	1	0	2	0	1	0	0	0	0	127
50	75	12	0	2	0	1	0	0	0	0	0	140
46	70	11	2	1	0	0	4	2	0	0	0	136
55	77	14	0	0	2	0	2	0	0	2	0	152
50	76	15	1	1	0	0	0	0	0	0	0	143
50	68	9	0	1	0	0	0	1	0	0	0	129
45	70	11	0	2	0	0	1	0	0	0	0	129
374	564	96	6	8	4	1	8	4	0	2	0	1067
WEST LEG												
19	59	0	1	0	0	0	2	0	0	0	0	81
25	74	3	0	1	0	0	0	0	0	0	0	103
19	67	3	2	0	0	1	2	0	0	1	0	95
31	69	5	0	3	0	0	1	0	0	0	0	109
35	77	4	0	0	0	0	0	2	0	0	0	118
33	65	6	0	2	0	0	3	0	0	0	0	109
26	65	5	0	1	0	0	0	0	0	0	0	97
25	60	6	0	0	0	0	0	0	0	0	0	91
213	536	32	3	7	0	1	8	2	0	1	0	803

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: MOJAVE DR

TIME: 07:00AM-08:00AM

DATE: 12-15-22

NORTH LEG

9	377	121	Total
2	65	31	1st
0	90	30	2nd
3	103	27	3rd
4	119	33	4th
Rt	Thru	Lt	

Rt	41	40	51	48	180
Thru	59	71	77	75	282
Lt	11	16	12	13	52
	1st	2nd	3rd	4th	Total

Total 1st 2nd 3rd 4th

11	0	3	3	5	Lt
279	61	75	70	73	Thru
98	20	25	22	31	Rt

	Lt	Thru	Rt
1st	16	60	15
2nd	23	73	10
3rd	20	96	19
4th	25	111	23
Total	84	340	67

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: MOJAVE DR

TIME: 08:00AM-09:00AM

DATE: 12-15-22

NORTH LEG

42	452	119	Total
14	123	35	1st
8	122	30	2nd
10	111	26	3rd
10	96	28	4th
Rt	Thru	Lt	

Rt	55	51	50	45	201
Thru	81	77	69	73	300
Lt	16	15	10	11	52
	1st	2nd	3rd	4th	Total

Total 1st 2nd 3rd 4th

23	6	6	5	6	Lt
273	77	70	66	60	Thru
119	35	33	26	25	Rt

	Lt	Thru	Rt
1st	29	121	27
2nd	31	116	20
3rd	30	100	20
4th	23	83	15
Total	113	420	82

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: HWY 395
 EAST-WEST STREET: MOJAVE DR
 JURISDICTION: VICTORVILLE

DATE: 12-15-22

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 1,072

60	803	209	Total
10	210	57	1st
14	193	49	2nd
16	214	53	3rd
20	186	50	4th

Rt Thru Lt

EAST LEG TOTAL: 604

Rt	41	45	46	40	172
Thru	88	86	93	90	357
Lt	23	16	20	16	75

1st 2nd 3rd 4th Total

Total 1st 2nd 3rd 4th

34	6	8	10	10	Lt
343	80	86	88	89	Thru
96	24	25	27	20	Rt

WEST LEG TOTAL: 473

PEAK HOUR FACTORS

NORTH LEG = 0.95
 SOUTH LEG = 0.94
 EAST LEG = 0.95
 WEST LEG = 0.95
 ALL LEGS = 0.95

	Lt	Thru	Rt
1st	29	149	20
2nd	24	139	25
3rd	26	163	26
4th	20	166	20
Total	99	617	91

TOTAL: 807

SOUTH LEG

HOURLY TOTAL: 2,956

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : HWY 395

VICTORVILLE

EAST-WEST STREET : MOJAVE DR

12-15-22

BEGINNING TIME : 04:00PM

AUTOS			LARGE 2 AXLE			3 AXLE			4 (+) AXLE			TOTALS
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
NORTH LEG												
12	169	53	0	3	0	0	2	0	0	5	0	244
13	197	48	0	1	1	0	0	1	0	5	0	266
9	199	56	1	0	0	0	4	1	0	7	0	277
13	182	49	1	0	0	0	4	0	0	7	0	256
15	208	52	0	2	1	1	0	0	0	4	0	283
20	172	50	0	4	0	0	0	0	0	10	0	256
14	164	41	0	0	1	1	0	2	0	9	0	232
12	173	40	1	2	0	0	0	1	0	6	0	235
108	1464	389	3	12	3	2	10	5	0	53	0	2049
SOUTH LEG												
13	113	25	0	2	0	0	2	0	0	6	0	161
21	147	23	0	0	0	2	1	0	0	5	0	199
19	141	26	0	0	1	1	2	2	0	6	0	198
24	124	23	1	0	0	0	2	1	0	13	0	188
25	152	26	1	4	0	0	0	0	0	7	0	215
19	156	20	0	1	0	1	0	0	0	9	0	206
20	133	21	0	0	0	0	0	0	0	10	0	184
14	130	17	0	1	0	0	3	1	0	6	0	172
155	1096	181	2	8	1	4	10	4	0	62	0	1523
EAST LEG												
38	79	12	0	0	1	0	0	0	0	0	1	131
43	82	19	1	1	0	0	1	0	0	0	0	147
41	86	23	0	1	0	0	1	0	0	0	0	152
43	84	16	1	1	0	1	1	0	0	0	0	147
45	93	18	0	0	1	1	0	1	0	0	0	159
40	89	15	0	1	0	0	0	1	0	0	0	146
43	83	16	1	0	0	0	0	0	0	0	0	143
36	78	13	0	2	0	1	1	0	0	0	0	131
329	674	132	3	6	2	3	4	2	0	0	1	1156
WEST LEG												
20	80	4	1	3	0	0	0	1	0	0	0	109
24	78	5	0	1	1	2	1	0	0	0	0	112
23	80	5	1	0	0	0	0	1	0	0	0	110
24	84	5	0	2	1	1	0	2	0	0	0	119
27	88	10	0	0	0	0	0	0	0	0	0	125
20	89	9	0	0	0	0	0	1	0	0	0	119
23	71	6	2	1	0	0	1	0	0	0	0	104
23	74	10	0	1	0	0	2	0	0	0	0	110
184	644	54	4	8	2	3	4	5	0	0	0	908

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: MOJAVE DR

TIME: 04:00PM-05:00PM

DATE: 12-15-22

NORTH LEG

49	785	209	Total
12	179	53	1st
13	203	50	2nd
10	210	57	3rd
14	193	49	4th
Rt	Thru	Lt	

Rt	38	44	41	45	168
Thru	79	84	88	86	337
Lt	14	19	23	16	72
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
25	5	6	6	8	Lt
329	83	80	80	86	Thru
96	21	26	24	25	Rt

	Lt	Thru	Rt
1st	25	123	13
2nd	23	153	23
3rd	29	149	20
4th	24	139	25
Total	101	564	81

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: HWY 395

EAST-WEST STREET: MOJAVE DR

TIME: 05:00PM-06:00PM

DATE: 12-15-22

NORTH LEG

64	754	188	Total
16	214	53	1st
20	186	50	2nd
15	173	44	3rd
13	181	41	4th
Rt	Thru	Lt	

Rt	46	40	44	37	167
Thru	93	90	83	81	347
Lt	20	16	16	13	65
	1st	2nd	3rd	4th	Total

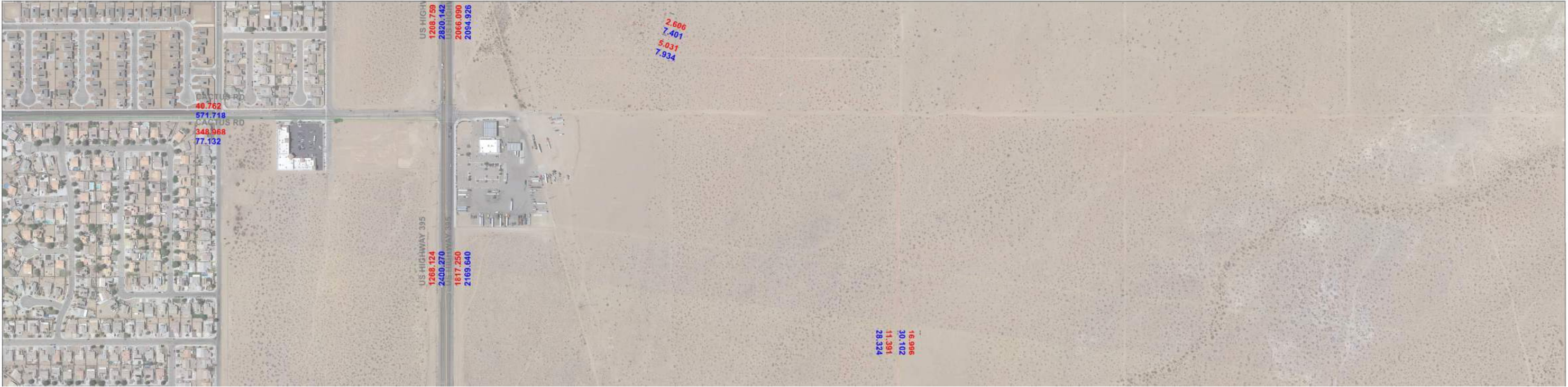
Total	1st	2nd	3rd	4th	
36	10	10	6	10	Lt
327	88	89	73	77	Thru
95	27	20	25	23	Rt

	Lt	Thru	Rt
1st	26	163	26
2nd	20	166	20
3rd	21	143	20
4th	18	140	14
Total	85	612	80

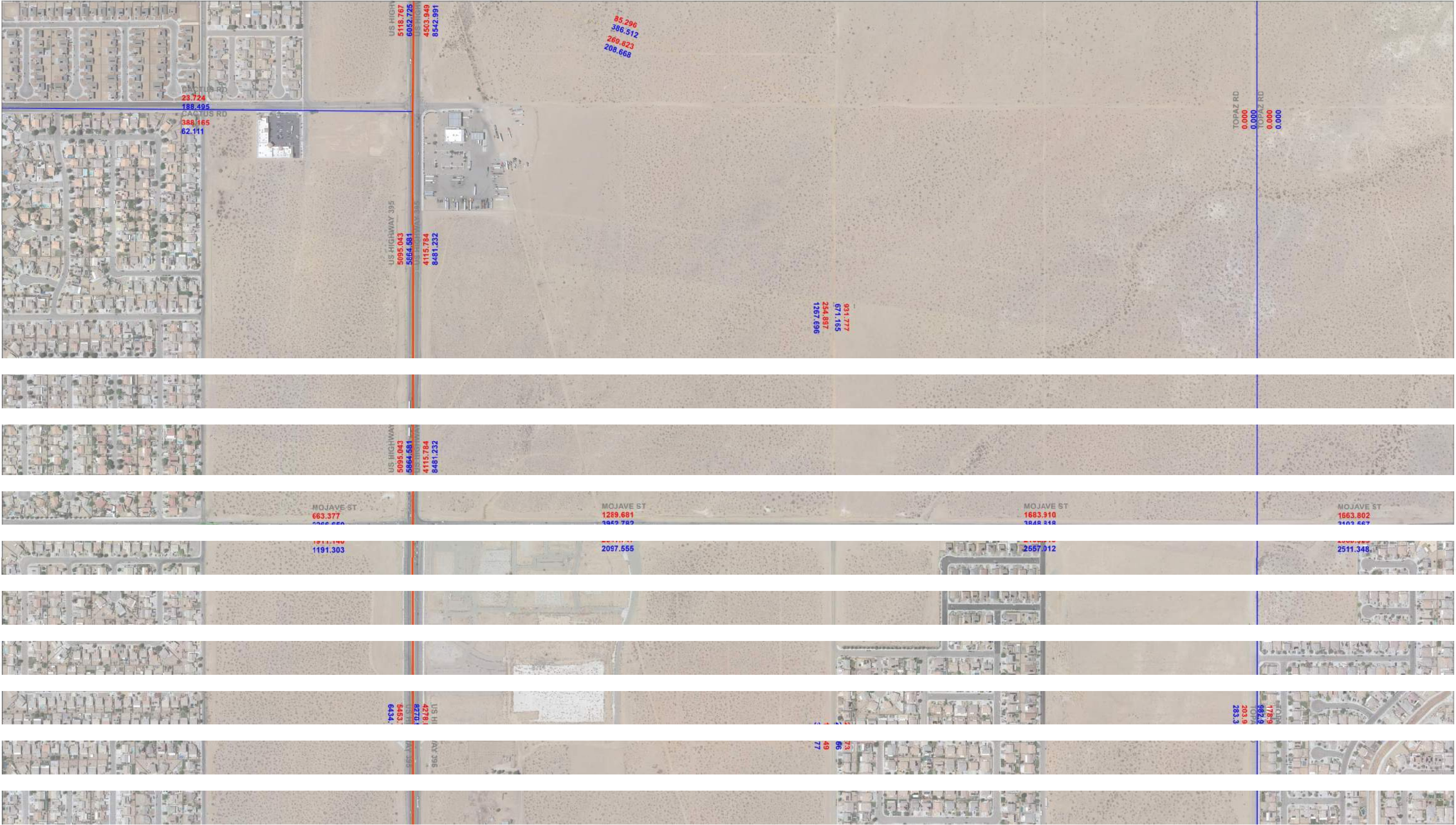
Prepared by NEWPORT TRAFFIC STUDIES

Appendix C : Forecast Model Volume Development

2016 AM/PM Volumes



2040 AM/PM Volumes



Appendix D: Intersection Capacity Analysis Calculations



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1 OF 2

E/W STREET : CACTUS ROAD

N/S STREET : HIGHWAY 395

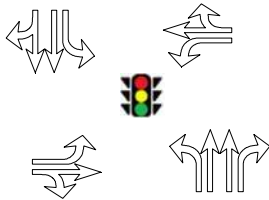
CONDITION : AM PEAK HOUR

INTERSECTION : 1

PROJECTED GROWTH : 3.5%

PER YEAR :

CONDITION DIAGRAMS



EXISTING GEOMETRICS

TURN MOVEMENTS

	Existing	Year 2024	Other			Background	Year 2034	Future	Future	Future	Future
Condition	Condition	Ambient	Area	Background	Project	+ Project	Ambient	Background	Background	Year 2044	Year 2044
Scenario #	1			3		5		7	9	11	13

CACTUS ROAD

EB LEFT	7	0	0	7	0	7	2	9	9	11	11
EB THRU	66	5	2	73	0	73	23	96	96	69	69
EB RIGHT	59	4	0	63	0	63	21	84	84	69	69
WB LEFT	61	4	2	67	17	84	21	88	105	80	97
WB THRU	73	5	5	83	1	84	26	109	110	59	60
WB RIGHT	41	3	2	46	6	52	14	60	66	76	82

HIGHWAY 395

NB LEFT	251	18	0	269	0	269	88	357	357	252	252
NB THRU	486	34	3	523	0	523	170	693	693	1196	1196
NB RIGHT	51	4	17	72	54	126	18	90	144	95	149
SB LEFT	36	3	6	45	16	61	13	58	74	96	112
SB THRU	638	45	8	691	0	691	223	914	914	1822	1822
SB RIGHT	27	2	0	29	0	29	9	38	38	44	44
TOTALS	1796	127	45	1968	94	2062	628	2596	2690	3869	3963

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Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TM	19-Jun-23	PIXI5AMG-0001	2	OF 2

E/W STREET : CACTUS ROAD
CONDITION : AM PEAK HOUR

N/S STREET : HIGHWAY 395
PHF : 0.91

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
4	113	1	0	2	0	0	2	0	0	14	3
6	132	3	0	1	0	0	1	0	0	10	2
10	119	0	0	1	1	0	0	0	0	15	2
7	111	2	0	0	1	0	1	0	0	10	2

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
2	85	63	1	3	0	0	1	0	2	10	0
5	94	66	2	2	0	1	1	0	3	9	0
3	88	59	0	1	0	1	2	0	2	9	0
8	88	55	1	0	0	0	0	0	0	5	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced Totals
--	------------------	-----------------	-------------------	---------------	--------------------

CACTUS ROAD

EB LEFT	3	2	5	7	7
EB THRU	0	66	66	66	66
EB RIGHT	0	59	59	59	59
WB LEFT	11	30	41	61	61
WB THRU	1	70	71	73	73
WB RIGHT	13	10	23	41	41

HIGHWAY 395

NB LEFT	0	243	243	243	251
NB THRU	43	355	398	471	486
NB RIGHT	13	18	31	49	51
SB LEFT	11	6	17	36	36
SB THRU	57	475	532	636	638
SB RIGHT	0	27	27	27	27

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	14	5	0	1	1	0	0	0	3	0	2
1	21	8	1	0	0	1	0	1	2	0	2
4	16	11	0	0	0	0	0	0	1	0	1
4	19	6	1	0	0	1	0	0	3	0	4

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
15	11	0	0	0	0	0	0	1	0	0	0
18	21	0	0	0	2	0	0	0	0	0	0
11	20	2	0	0	0	0	0	0	0	0	0
15	14	0	0	0	0	0	0	0	0	0	0

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Victorville Office: 760.524.9100

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/15/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	66	59	61	73	41	251	486	51	36	638	27
Future Volume (veh/h)	7	66	59	61	73	41	251	486	51	36	638	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	8	73	65	67	80	45	276	534	56	40	701	30
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	132	117	149	162	91	264	2487	1109	52	2032	87
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.73	0.73	0.03	0.61	0.61
Sat Flow, veh/h	1286	878	782	1271	1082	609	1783	3420	1525	1783	3341	143
Grp Volume(v), veh/h	8	0	138	67	0	125	276	534	56	40	359	372
Grp Sat Flow(s),veh/h/ln	1286	0	1659	1271	0	1690	1783	1710	1525	1783	1710	1774
Q Serve(g_s), s	0.7	0.0	9.9	6.6	0.0	8.7	19.0	6.5	1.3	2.9	13.3	13.4
Cycle Q Clear(g_c), s	9.4	0.0	9.9	16.5	0.0	8.7	19.0	6.5	1.3	2.9	13.3	13.4
Prop In Lane	1.00		0.47	1.00		0.36	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	162	0	249	149	0	254	264	2487	1109	52	1040	1079
V/C Ratio(X)	0.05	0.00	0.55	0.45	0.00	0.49	1.05	0.21	0.05	0.77	0.34	0.35
Avail Cap(c_a), veh/h	330	0	466	315	0	474	264	2487	1109	195	1040	1079
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	50.5	58.2	0.0	50.0	54.6	5.7	4.9	61.9	12.5	12.5
Incr Delay (d2), s/veh	0.1	0.0	1.9	2.1	0.0	1.5	67.6	0.2	0.1	21.4	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.2	2.2	0.0	3.8	13.1	1.9	0.4	1.6	4.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.5	0.0	52.4	60.3	0.0	51.5	122.3	5.8	5.0	83.3	13.4	13.3
LnGrp LOS	D	A	D	E	A	D	F	A	A	F	B	B
Approach Vol, veh/h	146			192			866			771		
Approach Delay, s/veh	52.5			54.6			42.9			17.0		
Approach LOS	D			D			D			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	97.3		23.3	23.0	82.0		23.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	83.0		36.0	19.0	78.0		36.0				
Max Q Clear Time (g_c+I1), s	4.9	8.5		11.9	21.0	15.4		18.5				
Green Ext Time (p_c), s	0.0	3.5		0.7	0.0	4.2		0.8				
Intersection Summary												
HCM 6th Ctrl Delay	34.6											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	73	63	67	83	46	269	523	72	45	691	29
Future Volume (veh/h)	7	73	63	67	83	46	269	523	72	45	691	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	8	80	69	74	91	51	296	575	79	49	759	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	144	125	155	175	98	260	2429	1083	64	2005	85
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.71	0.71	0.04	0.60	0.60
Sat Flow, veh/h	1266	892	769	1258	1083	607	1783	3420	1525	1783	3344	141
Grp Volume(v), veh/h	8	0	149	74	0	142	296	575	79	49	388	403
Grp Sat Flow(s),veh/h/ln	1266	0	1662	1258	0	1691	1783	1710	1525	1783	1710	1775
Q Serve(g_s), s	0.8	0.0	10.7	7.5	0.0	10.0	19.0	7.6	2.1	3.5	15.3	15.3
Cycle Q Clear(g_c), s	10.8	0.0	10.7	18.2	0.0	10.0	19.0	7.6	2.1	3.5	15.3	15.3
Prop In Lane	1.00		0.46	1.00		0.36	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	163	0	269	155	0	274	260	2429	1083	64	1026	1064
V/C Ratio(X)	0.05	0.00	0.55	0.48	0.00	0.52	1.14	0.24	0.07	0.77	0.38	0.38
Avail Cap(c_a), veh/h	309	0	460	300	0	468	260	2429	1083	192	1026	1064
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	0.0	50.2	58.6	0.0	49.9	55.5	6.6	5.8	62.2	13.5	13.5
Incr Delay (d2), s/veh	0.1	0.0	1.8	2.3	0.0	1.5	97.6	0.2	0.1	17.6	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.6	2.5	0.0	4.3	15.2	2.3	0.6	1.9	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	0.0	52.0	60.8	0.0	51.4	153.2	6.8	5.9	79.8	14.5	14.5
LnGrp LOS	D	A	D	E	A	D	F	A	A	E	B	B
Approach Vol, veh/h	157				216				950			
Approach Delay, s/veh	52.1				54.6				52.3			
Approach LOS	D				D				D			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	96.4		25.1	23.0	82.0		25.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	83.0		36.0	19.0	78.0		36.0				
Max Q Clear Time (g_c+I1), s	5.5	9.6		12.8	21.0	17.3		20.2				
Green Ext Time (p_c), s	0.0	3.9		0.8	0.0	4.6		0.8				
Intersection Summary												
HCM 6th Ctrl Delay	39.3											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	73	63	84	84	52	269	523	126	61	691	29
Future Volume (veh/h)	7	73	63	84	84	52	269	523	126	61	691	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	8	80	69	92	92	57	296	575	138	67	759	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	174	156	134	172	182	113	256	2347	1047	86	1975	83
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.14	0.69	0.69	0.05	0.59	0.59
Sat Flow, veh/h	1258	892	769	1258	1040	644	1783	3420	1525	1783	3344	141
Grp Volume(v), veh/h	8	0	149	92	0	149	296	575	138	67	388	403
Grp Sat Flow(s),veh/h/ln	1258	0	1662	1258	0	1684	1783	1710	1525	1783	1710	1775
Q Serve(g_s), s	0.8	0.0	10.7	9.4	0.0	10.6	19.0	8.4	4.1	4.9	15.9	15.9
Cycle Q Clear(g_c), s	11.3	0.0	10.7	20.2	0.0	10.6	19.0	8.4	4.1	4.9	15.9	15.9
Prop In Lane	1.00		0.46	1.00		0.38	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	174	0	290	172	0	294	256	2347	1047	86	1010	1048
V/C Ratio(X)	0.05	0.00	0.51	0.53	0.00	0.51	1.15	0.24	0.13	0.78	0.38	0.38
Avail Cap(c_a), veh/h	297	0	453	295	0	459	256	2347	1047	189	1010	1048
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	0.0	49.4	58.6	0.0	49.3	56.5	7.8	7.1	62.2	14.3	14.3
Incr Delay (d2), s/veh	0.1	0.0	1.4	2.6	0.0	1.3	104.3	0.2	0.3	14.0	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.6	3.1	0.0	4.6	15.6	2.7	1.2	2.5	5.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	0.0	50.8	61.1	0.0	50.7	160.8	8.1	7.4	76.2	15.4	15.4
LnGrp LOS	D	A	D	E	A	D	F	A	A	E	B	B
Approach Vol, veh/h		157			241			1009			858	
Approach Delay, s/veh		51.0			54.7			52.8			20.2	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	94.6		27.1	23.0	82.0		27.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	83.0		36.0	19.0	78.0		36.0				
Max Q Clear Time (g_c+I1), s	6.9	10.4		13.3	21.0	17.9		22.2				
Green Ext Time (p_c), s	0.1	4.1		0.8	0.0	4.6		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			40.5									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	96	84	88	109	60	357	693	90	58	914	38
Future Volume (veh/h)	9	96	84	88	109	60	357	693	90	58	914	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	9	101	88	93	115	63	376	729	95	61	962	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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	184	177	154	172	218	120	406	2276	1015	78	1612	67
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.23	0.67	0.67	0.04	0.48	0.48
Sat Flow, veh/h	1225	888	773	1213	1093	599	1783	3420	1525	1783	3346	139
Grp Volume(v), veh/h	9	0	189	93	0	178	376	729	95	61	492	510
Grp Sat Flow(s),veh/h/ln	1225	0	1661	1213	0	1692	1783	1710	1525	1783	1710	1775
Q Serve(g_s), s	0.9	0.0	13.6	9.9	0.0	12.4	27.3	12.0	2.9	4.5	27.7	27.7
Cycle Q Clear(g_c), s	13.3	0.0	13.6	23.5	0.0	12.4	27.3	12.0	2.9	4.5	27.7	27.7
Prop In Lane	1.00		0.47	1.00		0.35	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	184	0	332	172	0	338	406	2276	1015	78	824	855
V/C Ratio(X)	0.05	0.00	0.57	0.54	0.00	0.53	0.93	0.32	0.09	0.78	0.60	0.60
Avail Cap(c_a), veh/h	273	0	452	260	0	461	539	2276	1015	121	824	855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	47.8	58.4	0.0	47.3	50.0	9.4	7.9	62.6	24.9	24.9
Incr Delay (d2), s/veh	0.1	0.0	1.5	2.6	0.0	1.3	18.7	0.4	0.2	15.5	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.7	3.2	0.0	5.4	13.7	4.0	0.9	2.3	11.1	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	0.0	49.3	61.0	0.0	48.6	68.6	9.8	8.1	78.0	28.1	28.0
LnGrp LOS	D	A	D	E	A	D	E	A	A	E	C	C
Approach Vol, veh/h		198			271			1200			1063	
Approach Delay, s/veh		49.5			52.8			28.1			30.9	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	92.0		30.4	34.1	67.7		30.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	88.0		36.0	40.0	57.0		36.0				
Max Q Clear Time (g_c+I1), s	6.5	14.0		15.6	29.3	29.7		25.5				
Green Ext Time (p_c), s	0.0	5.2		1.0	0.8	5.9		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			33.2									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	96	84	105	110	66	357	693	144	74	914	38
Future Volume (veh/h)	9	96	84	105	110	66	357	693	144	74	914	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	9	101	88	111	116	69	376	729	152	78	962	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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	192	188	164	187	224	133	405	2207	984	98	1583	66
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.23	0.65	0.65	0.05	0.47	0.47
Sat Flow, veh/h	1218	888	773	1213	1058	629	1783	3420	1525	1783	3346	139
Grp Volume(v), veh/h	9	0	189	111	0	185	376	729	152	78	492	510
Grp Sat Flow(s),veh/h/ln	1218	0	1661	1213	0	1687	1783	1710	1525	1783	1710	1775
Q Serve(g_s), s	0.9	0.0	13.8	12.2	0.0	13.2	28.2	13.1	5.4	5.9	29.0	29.0
Cycle Q Clear(g_c), s	14.1	0.0	13.8	26.0	0.0	13.2	28.2	13.1	5.4	5.9	29.0	29.0
Prop In Lane	1.00		0.47	1.00		0.37	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	192	0	352	187	0	357	405	2207	984	98	809	840
V/C Ratio(X)	0.05	0.00	0.54	0.59	0.00	0.52	0.93	0.33	0.15	0.80	0.61	0.61
Avail Cap(c_a), veh/h	256	0	438	250	0	445	523	2207	984	118	809	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	0.0	47.8	59.4	0.0	47.6	51.6	10.9	9.5	63.7	26.6	26.6
Incr Delay (d2), s/veh	0.1	0.0	1.3	3.0	0.0	1.2	20.0	0.4	0.3	26.2	3.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.8	3.9	0.0	5.7	14.3	4.5	1.7	3.3	11.8	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	49.1	62.4	0.0	48.8	71.6	11.3	9.9	89.9	29.9	29.8
LnGrp LOS	D	A	D	E	A	D	E	B	A	F	C	C
Approach Vol, veh/h		198			296			1257			1080	
Approach Delay, s/veh		49.3			53.9			29.2			34.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	92.0		32.9	35.0	68.5		32.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	9.0	88.0		36.0	40.0	57.0		36.0				
Max Q Clear Time (g_c+I1), s	7.9	15.1		16.1	30.2	31.0		28.0				
Green Ext Time (p_c), s	0.0	5.4		1.0	0.8	5.9		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				35.1								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	69	69	80	59	76	252	1196	95	96	1822	44
Future Volume (veh/h)	11	69	69	80	59	76	252	1196	95	96	1822	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	12	73	73	84	62	80	265	1259	100	101	1918	46
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	167	138	138	165	120	154	259	2294	1023	125	2033	49
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.15	0.67	0.67	0.07	0.60	0.60
Sat Flow, veh/h	1266	826	826	1262	714	921	1783	3420	1525	1783	3414	82
Grp Volume(v), veh/h	12	0	146	84	0	142	265	1259	100	101	957	1007
Grp Sat Flow(s),veh/h/ln	1266	0	1651	1262	0	1634	1783	1710	1525	1783	1710	1785
Q Serve(g_s), s	1.1	0.0	10.6	8.5	0.0	10.4	19.0	25.1	3.0	7.3	67.3	68.6
Cycle Q Clear(g_c), s	11.5	0.0	10.6	19.1	0.0	10.4	19.0	25.1	3.0	7.3	67.3	68.6
Prop In Lane	1.00		0.50	1.00		0.56	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	167	0	277	165	0	274	259	2294	1023	125	1018	1063
V/C Ratio(X)	0.07	0.00	0.53	0.51	0.00	0.52	1.02	0.55	0.10	0.81	0.94	0.95
Avail Cap(c_a), veh/h	303	0	454	300	0	449	259	2294	1023	191	1018	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	0.0	49.8	58.5	0.0	49.7	56.0	11.2	7.6	60.1	24.3	24.6
Incr Delay (d2), s/veh	0.2	0.0	1.6	2.4	0.0	1.5	62.4	1.0	0.2	14.0	16.9	17.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.5	2.8	0.0	4.3	12.7	8.2	0.9	3.7	28.0	29.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	0.0	51.3	60.9	0.0	51.2	118.4	12.2	7.8	74.0	41.2	42.1
LnGrp LOS	E	A	D	E	A	D	F	B	A	E	D	D
Approach Vol, veh/h	158			226			1624			2065		
Approach Delay, s/veh	51.6			54.8			29.2			43.3		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.2	91.8		26.0	23.0	82.0		26.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	83.0		36.0	19.0	78.0		36.0				
Max Q Clear Time (g_c+I1), s	9.3	27.1		13.5	21.0	70.6		21.1				
Green Ext Time (p_c), s	0.1	11.2		0.8	0.0	6.0		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	38.6											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	69	69	97	60	82	252	1196	149	112	1822	44
Future Volume (veh/h)	11	69	69	97	60	82	252	1196	149	112	1822	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	12	73	73	102	63	86	265	1259	157	118	1918	46
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	177	149	149	181	124	170	255	2222	991	142	2002	48
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.14	0.65	0.65	0.08	0.59	0.59
Sat Flow, veh/h	1258	826	826	1262	689	941	1783	3420	1525	1783	3414	82
Grp Volume(v), veh/h	12	0	146	102	0	149	265	1259	157	118	957	1007
Grp Sat Flow(s),veh/h/ln	1258	0	1651	1262	0	1631	1783	1710	1525	1783	1710	1785
Q Serve(g_s), s	1.2	0.0	10.6	10.5	0.0	11.0	19.0	27.1	5.3	8.7	69.9	71.2
Cycle Q Clear(g_c), s	12.1	0.0	10.6	21.1	0.0	11.0	19.0	27.1	5.3	8.7	69.9	71.2
Prop In Lane	1.00		0.50	1.00		0.58	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	177	0	298	181	0	294	255	2222	991	142	1003	1047
V/C Ratio(X)	0.07	0.00	0.49	0.56	0.00	0.51	1.04	0.57	0.16	0.83	0.95	0.96
Avail Cap(c_a), veh/h	291	0	447	295	0	441	255	2222	991	188	1003	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	49.0	58.5	0.0	49.2	57.0	12.9	9.1	60.3	25.8	26.1
Incr Delay (d2), s/veh	0.2	0.0	1.2	2.7	0.0	1.3	67.3	1.1	0.3	20.4	19.3	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.5	3.5	0.0	4.6	13.0	9.2	1.7	4.6	29.8	31.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	0.0	50.2	61.2	0.0	50.5	124.3	14.0	9.4	80.7	45.1	46.1
LnGrp LOS	D	A	D	E	A	D	F	B	A	F	D	D
Approach Vol, veh/h	158				251				1681			
Approach Delay, s/veh	50.6				54.9				30.9			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.6	90.4		28.0	23.0	82.0		28.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	14.0	83.0		36.0	19.0	78.0		36.0				
Max Q Clear Time (g_c+I1), s	10.7	29.1		14.1	21.0	73.2		23.1				
Green Ext Time (p_c), s	0.1	11.5		0.8	0.0	4.1		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	41.4											
HCM 6th LOS	D											



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1	OF 2

E/W STREET : CACTUS ROAD

N/S STREET : HIGHWAY 395

CONDITION : PM PEAK HOUR

INTERSECTION : 1

PROJECTED GROWTH : 3.5%

PER YEAR :

TURN MOVEMENTS

	Existing	Year 2024	Other			Background	Year 2034	Future	Future	Future	Future
Condition	Condition	Ambient	Area	Background	Project	+ Project	Ambient	Background	+ Project	Year 2044	+ Project
Scenario #	2			4		6		8	10	12	14

CACTUS ROAD

EB LEFT	15	1	0	16	0	16	5	21	21	18	18
EB THRU	19	1	2	22	0	22	7	29	29	19	19
EB RIGHT	37	3	0	40	0	40	13	53	53	38	38
WB LEFT	18	1	7	26	51	77	6	32	83	67	118
WB THRU	23	2	15	40	3	43	8	48	51	48	51
WB RIGHT	12	1	7	20	16	36	4	24	40	53	69

HIGHWAY 395

NB LEFT	102	7	0	109	0	109	36	145	145	107	107
NB THRU	774	54	10	838	0	838	271	1109	1109	2158	2158
NB RIGHT	33	2	11	46	21	67	12	58	79	79	100
SB LEFT	29	2	3	34	7	41	10	44	51	45	52
SB THRU	1088	76	4	1168	0	1168	381	1549	1549	1846	1846
SB RIGHT	56	4	0	60	0	60	20	80	80	41	41
TOTALS	2206	154	59	2419	98	2517	773	3192	3290	4519	4617

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TM	19-Jun-23	PIXI5AMG-0001	2	OF 2

E/W STREET : CACTUS ROAD
CONDITION : PM PEAK HOUR

N/S STREET : HIGHWAY 395
PHF : 0.94

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
18	256	0	0	1	0	0	1	0	0	5	2
12	238	0	0	0	0	0	1	0	0	5	2
15	259	0	0	3	2	0	1	0	0	3	1
11	231	2	0	2	0	0	0	0	0	8	3

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	162	23	0	0	0	0	3	0	1	5	0
0	148	23	0	2	0	2	1	2	1	10	0
1	179	29	0	4	0	0	1	0	3	4	0
0	187	22	0	1	0	0	1	0	4	4	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced Totals
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CACTUS ROAD

EB LEFT	1	13	14	15	15
EB THRU	0	19	19	19	19
EB RIGHT	2	32	34	36	37
WB LEFT	7	2	9	18	18
WB THRU	2	19	21	23	23
WB RIGHT	5	5	10	12	12

HIGHWAY 395

NB LEFT	2	97	99	101	102
NB THRU	36	676	712	768	774
NB RIGHT	11	2	13	33	33
SB LEFT	10	2	12	29	29
SB THRU	30	984	1014	1062	1,088
SB RIGHT	0	56	56	56	56

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	5	0	0	0	0	0	0	1	1	0	1
0	5	0	1	0	0	1	0	1	0	0	0
2	2	2	1	2	0	0	0	0	0	0	1
2	7	0	0	0	2	1	0	0	0	0	1

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
7	0	2	0	0	1	0	0	0	0	0	0
5	5	2	1	0	0	1	0	0	0	0	0
11	7	5	0	0	0	0	0	0	0	0	0
9	7	4	0	0	0	0	0	0	0	0	0

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Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/15/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	19	37	18	23	12	102	774	33	29	1088	56
Future Volume (veh/h)	15	19	37	18	23	12	102	774	33	29	1088	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	16	20	39	19	24	13	109	823	35	31	1157	60
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	127	37	72	106	74	40	134	2762	1232	39	2495	129
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.81	0.81	0.02	0.75	0.75
Sat Flow, veh/h	1393	545	1063	1365	1098	595	1783	3420	1525	1783	3308	171
Grp Volume(v), veh/h	16	0	59	19	0	37	109	823	35	31	598	619
Grp Sat Flow(s),veh/h/ln	1393	0	1609	1365	0	1693	1783	1710	1525	1783	1710	1769
Q Serve(g_s), s	1.3	0.0	4.1	1.6	0.0	2.4	7.0	7.1	0.5	2.0	15.4	15.4
Cycle Q Clear(g_c), s	3.7	0.0	4.1	5.7	0.0	2.4	7.0	7.1	0.5	2.0	15.4	15.4
Prop In Lane	1.00		0.66	1.00		0.35	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	127	0	109	106	0	114	134	2762	1232	39	1290	1335
V/C Ratio(X)	0.13	0.00	0.54	0.18	0.00	0.32	0.81	0.30	0.03	0.80	0.46	0.46
Avail Cap(c_a), veh/h	463	0	496	435	0	522	138	2762	1232	92	1290	1335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	0.0	52.6	55.4	0.0	51.8	53.1	2.8	2.2	56.8	5.4	5.4
Incr Delay (d2), s/veh	0.4	0.0	4.2	0.8	0.0	1.6	29.4	0.3	0.0	29.4	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.8	0.6	0.0	1.1	4.1	1.3	0.1	1.2	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	56.8	56.2	0.0	53.5	82.5	3.1	2.3	86.2	6.6	6.6
LnGrp LOS	D	A	E	E	A	D	F	A	A	F	A	A
Approach Vol, veh/h	75			56			967			1248		
Approach Delay, s/veh	56.2			54.4			12.0			8.6		
Approach LOS	E			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	98.2		11.9	12.8	92.0		11.9				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	91.0		36.0	9.0	88.0		36.0				
Max Q Clear Time (g_c+I1), s	4.0	9.1		6.1	9.0	17.4		7.7				
Green Ext Time (p_c), s	0.0	5.8		0.3	0.0	8.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	12.6											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	22	40	26	40	20	109	838	46	34	1168	60
Future Volume (veh/h)	16	22	40	26	40	20	109	838	46	34	1168	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	17	23	43	28	43	21	116	891	49	36	1243	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	120	45	83	115	91	44	136	2714	1211	46	2460	127
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.79	0.79	0.03	0.74	0.74
Sat Flow, veh/h	1359	561	1050	1357	1142	558	1783	3420	1525	1783	3309	170
Grp Volume(v), veh/h	17	0	66	28	0	64	116	891	49	36	642	665
Grp Sat Flow(s),veh/h/ln	1359	0	1611	1357	0	1700	1783	1710	1525	1783	1710	1769
Q Serve(g_s), s	1.4	0.0	4.7	2.4	0.0	4.3	7.6	8.6	0.8	2.4	18.3	18.3
Cycle Q Clear(g_c), s	5.7	0.0	4.7	7.1	0.0	4.3	7.6	8.6	0.8	2.4	18.3	18.3
Prop In Lane	1.00		0.65	1.00		0.33	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	120	0	128	115	0	135	136	2714	1211	46	1271	1315
V/C Ratio(X)	0.14	0.00	0.52	0.24	0.00	0.48	0.86	0.33	0.04	0.79	0.50	0.51
Avail Cap(c_a), veh/h	425	0	490	420	0	517	136	2714	1211	90	1271	1315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	0.0	52.3	55.7	0.0	52.1	54.1	3.4	2.6	57.3	6.2	6.2
Incr Delay (d2), s/veh	0.5	0.0	3.2	1.1	0.0	2.6	38.3	0.3	0.1	24.8	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.0	0.8	0.0	1.9	4.7	1.8	0.2	1.3	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	0.0	55.5	56.8	0.0	54.7	92.4	3.7	2.7	82.2	7.7	7.6
LnGrp LOS	E	A	E	E	A	D	F	A	A	F	A	A
Approach Vol, veh/h	83			92			1056			1343		
Approach Delay, s/veh	55.5			55.4			13.4			9.7		
Approach LOS	E			E			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	98.0		13.4	13.0	92.0		13.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	91.0		36.0	9.0	88.0		36.0				
Max Q Clear Time (g_c+I1), s	4.4	10.6		7.7	9.6	20.3		9.1				
Green Ext Time (p_c), s	0.0	6.5		0.4	0.0	10.0		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	14.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	22	40	77	43	36	109	838	67	41	1168	60
Future Volume (veh/h)	16	22	40	77	43	36	109	838	67	41	1168	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	17	23	43	82	46	38	116	891	71	44	1243	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	153	66	124	167	108	89	130	2576	1149	57	2356	121
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.07	0.75	0.75	0.03	0.71	0.71
Sat Flow, veh/h	1335	561	1050	1357	911	753	1783	3420	1525	1783	3309	170
Grp Volume(v), veh/h	17	0	66	82	0	84	116	891	71	44	642	665
Grp Sat Flow(s),veh/h/ln	1335	0	1611	1357	0	1664	1783	1710	1525	1783	1710	1769
Q Serve(g_s), s	1.5	0.0	4.7	7.3	0.0	5.8	8.0	10.7	1.5	3.0	21.4	21.4
Cycle Q Clear(g_c), s	7.3	0.0	4.7	12.0	0.0	5.8	8.0	10.7	1.5	3.0	21.4	21.4
Prop In Lane	1.00		0.65	1.00		0.45	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	153	0	190	167	0	196	130	2576	1149	57	1218	1260
V/C Ratio(X)	0.11	0.00	0.35	0.49	0.00	0.43	0.89	0.35	0.06	0.78	0.53	0.53
Avail Cap(c_a), veh/h	384	0	469	402	0	485	130	2576	1149	87	1218	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	0.0	50.1	55.6	0.0	50.6	56.8	5.1	3.9	59.4	8.2	8.2
Incr Delay (d2), s/veh	0.3	0.0	1.1	2.2	0.0	1.5	48.3	0.4	0.1	21.1	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.9	2.6	0.0	2.5	5.2	2.8	0.4	1.6	6.6	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	0.0	51.2	57.8	0.0	52.1	105.1	5.5	4.1	80.5	9.8	9.8
LnGrp LOS	D	A	D	E	A	D	F	A	A	F	A	A
Approach Vol, veh/h	83			166			1078			1351		
Approach Delay, s/veh	51.8			54.9			16.1			12.1		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	97.1		18.6	13.0	92.0		18.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	91.0		36.0	9.0	88.0		36.0				
Max Q Clear Time (g_c+I1), s	5.0	12.7		9.3	10.0	23.4		14.0				
Green Ext Time (p_c), s	0.0	6.6		0.4	0.0	10.0		0.6				
Intersection Summary												
HCM 6th Ctrl Delay	17.6											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	29	53	32	48	24	145	1109	58	44	1549	80
Future Volume (veh/h)	21	29	53	32	48	24	145	1109	58	44	1549	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	22	31	56	34	51	25	153	1167	61	46	1631	84
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	135	56	101	122	111	54	181	2624	1170	59	2313	119
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.77	0.77	0.03	0.70	0.70
Sat Flow, veh/h	1344	575	1038	1331	1140	559	1783	3420	1525	1783	3310	170
Grp Volume(v), veh/h	22	0	87	34	0	76	153	1167	61	46	839	876
Grp Sat Flow(s),veh/h/ln	1344	0	1613	1331	0	1699	1783	1710	1525	1783	1710	1769
Q Serve(g_s), s	1.8	0.0	6.0	2.9	0.0	5.0	9.9	14.1	1.1	3.0	34.0	34.7
Cycle Q Clear(g_c), s	6.8	0.0	6.0	9.0	0.0	5.0	9.9	14.1	1.1	3.0	34.0	34.7
Prop In Lane	1.00		0.64	1.00		0.33	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	135	0	157	122	0	165	181	2624	1170	59	1195	1237
V/C Ratio(X)	0.16	0.00	0.55	0.28	0.00	0.46	0.85	0.44	0.05	0.78	0.70	0.71
Avail Cap(c_a), veh/h	417	0	495	401	0	521	228	2624	1170	122	1195	1237
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	50.5	54.8	0.0	50.0	51.8	4.8	3.3	56.3	10.4	10.5
Incr Delay (d2), s/veh	0.6	0.0	3.0	1.2	0.0	2.0	20.4	0.5	0.1	19.2	3.5	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.6	1.0	0.0	2.2	5.3	3.4	0.3	1.6	10.7	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	0.0	53.6	56.0	0.0	52.0	72.2	5.4	3.4	75.5	13.9	14.0
LnGrp LOS	D	A	D	E	A	D	E	A	A	E	B	B
Approach Vol, veh/h	109			110			1381			1761		
Approach Delay, s/veh	53.6			53.3			12.7			15.5		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	94.0		15.4	15.9	86.0		15.4				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	89.0		36.0	15.0	82.0		36.0				
Max Q Clear Time (g_c+I1), s	5.0	16.1		8.8	11.9	36.7		11.0				
Green Ext Time (p_c), s	0.0	9.8		0.5	0.1	16.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	29	53	83	51	40	145	1109	79	51	1549	80
Future Volume (veh/h)	21	29	53	83	51	40	145	1109	79	51	1549	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	22	31	56	87	54	42	153	1167	83	54	1631	84
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	167	78	140	173	127	99	180	2491	1111	70	2206	113
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.10	0.73	0.73	0.04	0.67	0.67
Sat Flow, veh/h	1320	575	1038	1331	939	730	1783	3420	1525	1783	3310	170
Grp Volume(v), veh/h	22	0	87	87	0	96	153	1167	83	54	839	876
Grp Sat Flow(s),veh/h/ln	1320	0	1613	1331	0	1669	1783	1710	1525	1783	1710	1769
Q Serve(g_s), s	1.9	0.0	6.1	7.9	0.0	6.5	10.4	17.3	1.9	3.7	39.5	40.3
Cycle Q Clear(g_c), s	8.4	0.0	6.1	13.9	0.0	6.5	10.4	17.3	1.9	3.7	39.5	40.3
Prop In Lane	1.00		0.64	1.00		0.44	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	167	0	218	173	0	225	180	2491	1111	70	1140	1179
V/C Ratio(X)	0.13	0.00	0.40	0.50	0.00	0.43	0.85	0.47	0.07	0.78	0.74	0.74
Avail Cap(c_a), veh/h	375	0	472	382	0	488	217	2491	1111	116	1140	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	0.0	48.6	55.0	0.0	48.8	54.4	6.9	4.8	58.6	13.4	13.6
Incr Delay (d2), s/veh	0.4	0.0	1.2	2.3	0.0	1.3	22.9	0.6	0.1	16.6	4.2	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.5	2.7	0.0	2.8	5.6	4.9	0.5	1.9	13.5	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	49.8	57.3	0.0	50.1	77.3	7.5	4.9	75.1	17.7	17.8
LnGrp LOS	D	A	D	E	A	D	E	A	A	E	B	B
Approach Vol, veh/h	109			183			1403			1769		
Approach Delay, s/veh	50.5			53.5			15.0			19.5		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	93.6		20.6	16.4	86.0		20.6				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	8.0	89.0		36.0	15.0	82.0		36.0				
Max Q Clear Time (g_c+I1), s	5.7	19.3		10.4	12.4	42.3		15.9				
Green Ext Time (p_c), s	0.0	9.9		0.5	0.1	15.5		0.7				
Intersection Summary												
HCM 6th Ctrl Delay	20.4											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	19	38	67	48	53	107	2158	79	45	1846	41
Future Volume (veh/h)	18	19	38	67	48	53	107	2158	79	45	1846	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	19	20	40	71	51	56	113	2272	83	47	1943	43
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	119	58	116	159	85	93	131	2599	1159	60	2464	54
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.07	0.76	0.76	0.03	0.72	0.72
Sat Flow, veh/h	1307	536	1071	1364	784	861	1783	3420	1525	1783	3421	75
Grp Volume(v), veh/h	19	0	60	71	0	107	113	2272	83	47	968	1018
Grp Sat Flow(s),veh/h/ln	1307	0	1607	1364	0	1645	1783	1710	1525	1783	1710	1786
Q Serve(g_s), s	1.7	0.0	4.2	6.2	0.0	7.6	7.7	58.0	1.7	3.2	44.5	45.3
Cycle Q Clear(g_c), s	9.3	0.0	4.2	10.4	0.0	7.6	7.7	58.0	1.7	3.2	44.5	45.3
Prop In Lane	1.00		0.67	1.00		0.52	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	119	0	173	159	0	177	131	2599	1159	60	1232	1287
V/C Ratio(X)	0.16	0.00	0.35	0.45	0.00	0.60	0.86	0.87	0.07	0.78	0.79	0.79
Avail Cap(c_a), veh/h	363	0	474	414	0	485	131	2599	1159	88	1232	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	0.0	50.5	55.3	0.0	52.0	56.0	10.5	3.7	58.6	11.0	11.1
Incr Delay (d2), s/veh	0.6	0.0	1.2	2.0	0.0	3.3	40.2	4.5	0.1	23.1	5.1	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.7	2.2	0.0	3.3	4.8	15.7	0.4	1.8	14.0	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	0.0	51.7	57.3	0.0	55.3	96.2	14.9	3.8	81.6	16.1	16.2
LnGrp LOS	E	A	D	E	A	E	F	B	A	F	B	B
Approach Vol, veh/h		79			178			2468			2033	
Approach Delay, s/veh		53.0			56.1			18.3			17.6	
Approach LOS		D			E			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	96.9		17.2	13.0	92.0		17.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	91.0		36.0	9.0	88.0		36.0				
Max Q Clear Time (g_c+I1), s	5.2	60.0		11.3	9.7	47.3		12.4				
Green Ext Time (p_c), s	0.0	22.5		0.3	0.0	20.8		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

1: US Highway 395 & Cactus Rd

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	19	38	118	51	69	107	2158	100	52	1846	41
Future Volume (veh/h)	18	19	38	118	51	69	107	2158	100	52	1846	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1872	1800	1800	1872	1800	1800
Adj Flow Rate, veh/h	19	20	40	124	54	73	113	2272	105	55	1943	43
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	150	78	156	209	101	136	126	2466	1100	71	2361	52
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.07	0.72	0.72	0.04	0.69	0.69
Sat Flow, veh/h	1284	536	1071	1364	694	938	1783	3420	1525	1783	3421	75
Grp Volume(v), veh/h	19	0	60	124	0	127	113	2272	105	55	968	1018
Grp Sat Flow(s),veh/h/ln	1284	0	1607	1364	0	1631	1783	1710	1525	1783	1710	1786
Q Serve(g_s), s	1.8	0.0	4.2	11.3	0.0	9.2	8.0	70.4	2.6	3.9	51.5	52.4
Cycle Q Clear(g_c), s	11.0	0.0	4.2	15.6	0.0	9.2	8.0	70.4	2.6	3.9	51.5	52.4
Prop In Lane	1.00		0.67	1.00		0.57	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	150	0	233	209	0	237	126	2466	1100	71	1180	1233
V/C Ratio(X)	0.13	0.00	0.26	0.59	0.00	0.54	0.90	0.92	0.10	0.78	0.82	0.83
Avail Cap(c_a), veh/h	326	0	454	396	0	461	126	2466	1100	84	1180	1233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	0.0	48.4	55.3	0.0	50.5	58.8	14.8	5.3	60.7	14.1	14.2
Incr Delay (d2), s/veh	0.4	0.0	0.6	2.7	0.0	1.9	50.4	7.1	0.2	31.2	6.4	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.7	4.0	0.0	3.9	5.2	22.3	0.7	2.3	17.7	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	0.0	49.0	58.0	0.0	52.4	109.2	21.9	5.5	91.9	20.5	20.6
LnGrp LOS	E	A	D	E	A	D	F	C	A	F	C	C
Approach Vol, veh/h	79			251			2490			2041		
Approach Delay, s/veh	50.7			55.2			25.2			22.5		
Approach LOS	D			E			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	95.9		22.5	13.0	92.0		22.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	91.0		36.0	9.0	88.0		36.0				
Max Q Clear Time (g_c+I1), s	5.9	72.4		13.0	10.0	54.4		17.6				
Green Ext Time (p_c), s	0.0	15.1		0.3	0.0	18.8		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	26.0											
HCM 6th LOS	C											

**CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM
FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)**

Intersection No.: 1
North/South Street: HIGHWAY 395
East/West Street: CACTUS ROAD

Analysis Condition: YEAR 2044 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction			Forecast Future Year				
			Link Volume		Turn Volume		Balanced Volume
South leg NB	Left	251	Approach	1,492	Left	253	252
	Through	486	Departure	1,931	Through	1,196	1,193
	Right	51			Right	78	78
North leg SB	Left	36	Approach	1,898	Left	90	90
	Through	638	Departure	1,281	Through	1,787	1,814
	Right	27			Right	44	44
West leg EB	Left	7	Approach	144	Left	11	11
	Through	66	Departure	351	Through	67	67
	Right	59			Right	68	69
East leg WB	Left	61	Approach	201	Left	77	78
	Through	73	Departure	235	Through	54	54
	Right	41			Right	74	74

P.M. Peak Hour

Approach Direction			Forecast Future Year				
			Link Volume		Turn Volume		Balanced Volume
South leg NB	Left	102	Approach	2,290	Left	107	107
	Through	774	Departure	1,901	Through	2,148	2,148
	Right	33			Right	68	68
North leg SB	Left	29	Approach	1,880	Left	42	42
	Through	1,088	Departure	2,212	Through	1,805	1,842
	Right	56			Right	41	41
West leg EB	Left	15	Approach	71	Left	18	18
	Through	19	Departure	181	Through	17	17
	Right	37			Right	37	38
East leg WB	Left	18	Approach	137	Left	59	60
	Through	23	Departure	126	Through	33	33



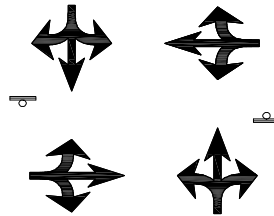
DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1 OF 2

E/W STREET : CACTUS ROAD
N/S STREET : MESA LINDA AVENUE
CONDITION : AM PEAK HOUR

INTERSECTION : 2
PROJECTED GROWTH : 3.5%
PER YEAR :

CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

	Existing	Year 2024	Other			Background	Year 2034	Future	Future	Future	Future
Condition	Condition	Ambient	Area	Background	Project	+ Project	Ambient	Background	Background	Year 2044	Year 2044
Scenario #	1			3		5		7	9	11	13

CACTUS ROAD

EB LEFT	0	0	0	0	0	0	0	0	0	0	0
EB THRU	153	11	6	190	0	190	54	244	244	266	266
EB RIGHT	0	0	6	6	11	17	0	6	17	6	17
WB LEFT	0	0	0	0	0	0	0	0	0	0	0
WB THRU	175	12	2	189	0	189	61	250	250	217	217
WB RIGHT	0	0	0	0	0	0	0	0	0	0	0

MESA LINDA AVENUE

NB LEFT	0	0	2	2	35	37	0	2	37	2	37
NB THRU	0	0	0	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0	0	0	0	0
TOTALS	328	23	16	387	46	433	115	502	548	491	537

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	170	17	0	189	0	37	0	0	0	0	0
Future Vol, veh/h	0	170	17	0	189	0	37	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	187	19	0	208	0	41	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	208	0	0	206	0	0	405	405	197	405	414	208
Stage 1	-	-	-	-	-	-	197	197	-	208	208	-
Stage 2	-	-	-	-	-	-	208	208	-	197	206	-
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	1375	-	-	1377	-	-	560	538	849	560	532	837
Stage 1	-	-	-	-	-	-	809	742	-	799	734	-
Stage 2	-	-	-	-	-	-	799	734	-	809	735	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1375	-	-	1377	-	-	560	538	849	560	532	837
Mov Cap-2 Maneuver	-	-	-	-	-	-	560	538	-	560	532	-
Stage 1	-	-	-	-	-	-	809	742	-	799	734	-
Stage 2	-	-	-	-	-	-	799	734	-	809	735	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			11.9			0		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	560	1375	-	-	1377	-	-	-				
HCM Lane V/C Ratio	0.073	-	-	-	-	-	-	-				
HCM Control Delay (s)	11.9	0	-	-	0	-	-	0				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	-				

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	224	17	0	250	0	37	0	0	0	0	0
Future Vol, veh/h	0	224	17	0	250	0	37	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	236	18	0	263	0	39	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	254	0	0	508	508	245	508	517	263
Stage 1	-	-	-	-	-	-	245	245	-	263	263	-
Stage 2	-	-	-	-	-	-	263	263	-	245	254	-
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	1313	-	-	1323	-	-	479	471	799	479	465	781
Stage 1	-	-	-	-	-	-	763	707	-	747	694	-
Stage 2	-	-	-	-	-	-	747	694	-	763	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1313	-	-	1323	-	-	479	471	799	479	465	781
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	471	-	479	465	-
Stage 1	-	-	-	-	-	-	763	707	-	747	694	-
Stage 2	-	-	-	-	-	-	747	694	-	763	701	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			13.2			0		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	479	1313	-	-	1323	-	-	-				
HCM Lane V/C Ratio	0.081	-	-	-	-	-	-	-				
HCM Control Delay (s)	13.2	0	-	-	0	-	-	0				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-				

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	266	17	0	217	0	37	0	0	0	0	0
Future Vol, veh/h	0	266	17	0	217	0	37	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	280	18	0	228	0	39	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	298	0	0	517	517	289	517	526	228
Stage 1	-	-	-	-	-	-	289	289	-	228	228	-
Stage 2	-	-	-	-	-	-	228	228	-	289	298	-
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	1352	-	-	1275	-	-	472	465	755	472	460	816
Stage 1	-	-	-	-	-	-	723	677	-	779	719	-
Stage 2	-	-	-	-	-	-	779	719	-	723	671	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1352	-	-	1275	-	-	472	465	755	472	460	816
Mov Cap-2 Maneuver	-	-	-	-	-	-	472	465	-	472	460	-
Stage 1	-	-	-	-	-	-	723	677	-	779	719	-
Stage 2	-	-	-	-	-	-	779	719	-	723	671	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			13.3			0		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	472	1352	-	-	1275	-	-	-				
HCM Lane V/C Ratio	0.083	-	-	-	-	-	-	-				
HCM Control Delay (s)	13.3	0	-	-	0	-	-	0				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-				



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1	OF 2

E/W STREET : CACTUS ROAD
N/S STREET : MESA LINDA AVENUE
CONDITION : PM PEAK HOUR

INTERSECTION : 2
PROJECTED GROWTH : 3.5%
PER YEAR :

TURN MOVEMENTS

	Existing	Year 2024	Other			Background	Year 2024	Future	Future	Future	Future
Condition	Condition	Ambient	Area	Background	Project	+ Project	Ambient	Background	+ Project	Year 2044	+ Project
Scenario #	2			4		6		8	10	12	14

CACTUS ROAD

EB LEFT	0	0	0	0	0	0	0	0	0	0	0
EB THRU	81	6	3	90	0	90	28	118	118	146	146
EB RIGHT	0	0	3	3	34	37	0	3	37	3	37
WB LEFT	0	0	0	0	0	0	0	0	0	0	0
WB THRU	53	4	7	64	0	64	19	83	83	175	175
WB RIGHT	0	0	0	0	0	0	0	0	0	0	0

MESA LINDA AVENUE

NB LEFT	0	0	7	7	14	21	0	7	21	7	21
NB THRU	0	0	0	0	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0	0	0	0	0
SB LEFT	0	0	0	0	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0	0	0	0	0
TOTALS	134	10	20	164	48	212	47	211	259	331	379

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	90	37	0	64	0	21	0	0	0	0	0
Future Vol, veh/h	0	90	37	0	64	0	21	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	96	39	0	68	0	22	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	135	0	0	184	184	116	184	203	68
Stage 1	-	-	-	-	-	-	116	116	-	68	68	-
Stage 2	-	-	-	-	-	-	68	68	-	116	135	-
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	1546	-	-	1462	-	-	781	714	942	781	697	1001
Stage 1	-	-	-	-	-	-	894	803	-	947	842	-
Stage 2	-	-	-	-	-	-	947	842	-	894	789	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1462	-	-	781	714	942	781	697	1001
Mov Cap-2 Maneuver	-	-	-	-	-	-	781	714	-	781	697	-
Stage 1	-	-	-	-	-	-	894	803	-	947	842	-
Stage 2	-	-	-	-	-	-	947	842	-	894	789	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			9.7			0		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	781	1546	-	-	1462	-	-	-				
HCM Lane V/C Ratio	0.029	-	-	-	-	-	-	-				
HCM Control Delay (s)	9.7	0	-	-	0	-	-	0				
HCM Lane LOS	A	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-				

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	118	37	0	83	0	21	0	0	0	0	0
Future Vol, veh/h	0	118	37	0	83	0	21	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	0	124	39	0	87	0	22	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	87	0	0	163	0	0	231	231	144	231	250	87
Stage 1	-	-	-	-	-	-	144	144	-	87	87	-
Stage 2	-	-	-	-	-	-	87	87	-	144	163	-
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	1522	-	-	1428	-	-	728	672	909	728	656	977
Stage 1	-	-	-	-	-	-	864	782	-	926	827	-
Stage 2	-	-	-	-	-	-	926	827	-	864	767	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1522	-	-	1428	-	-	728	672	909	728	656	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	672	-	728	656	-
Stage 1	-	-	-	-	-	-	864	782	-	926	827	-
Stage 2	-	-	-	-	-	-	926	827	-	864	767	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	728	1522	-	-	1428	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	0	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	146	37	0	175	0	21	0	0	0	0	0
Future Vol, veh/h	0	146	37	0	175	0	21	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	162	41	0	194	0	23	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	194	0	0	203	0	0	377	377	183	377	397	194
Stage 1	-	-	-	-	-	-	183	183	-	194	194	-
Stage 2	-	-	-	-	-	-	194	194	-	183	203	-
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	1391	-	-	1381	-	-	584	558	865	584	544	853
Stage 1	-	-	-	-	-	-	823	752	-	812	744	-
Stage 2	-	-	-	-	-	-	812	744	-	823	737	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1391	-	-	1381	-	-	584	558	865	584	544	853
Mov Cap-2 Maneuver	-	-	-	-	-	-	584	558	-	584	544	-
Stage 1	-	-	-	-	-	-	823	752	-	812	744	-
Stage 2	-	-	-	-	-	-	812	744	-	823	737	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	584	1391	-	-	1381	-	-	-
HCM Lane V/C Ratio	0.04	-	-	-	-	-	-	-
HCM Control Delay (s)	11.4	0	-	-	0	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-



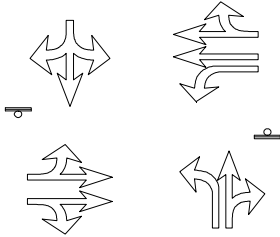
DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1	OF 2

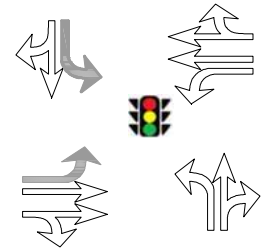
E/W STREET : MOJAVE DRIVE
N/S STREET : MESA LINDA AVENUE
CONDITION : AM PEAK HOUR

INTERSECTION : 3
PROJECTED GROWTH : 3.5%
PER YEAR :

CONDITION DIAGRAMS



EXISTING GEOMETRICS



**BACKGROUND GEOMETRICS
FROM MOJAVE 68 PROJECT**

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Other Area Development	Background Condition	Project Trips	Background + Project Condition	Year 2034 Ambient Growth	Future Background Condition	Future Background + Project Condition	Future Year 2044 Condition	Future Year 2044 + Project Condition
Scenario #	1			3		5		7	9	11	13

MOJAVE DRIVE

EB LEFT	0	0	43	43	0	43	0	43	43	43	43
EB THRU	500	35	0	535	0	535	175	710	710	677	677
EB RIGHT	19	1	6	26	0	26	7	33	33	40	40
WB LEFT	26	2	5	33	0	33	9	42	42	62	62
WB THRU	555	39	5	599	0	599	194	793	793	755	755
WB RIGHT	0	0	0	0	35	35	0	0	35	0	35

MESA LINDA AVENUE

NB LEFT	40	3	14	57	0	57	14	71	71	54	54
NB THRU	0	0	0	0	0	0	0	0	0	0	0
NB RIGHT	31	2	2	35	0	35	11	46	46	39	39
SB LEFT	0	0	14	14	11	25	0	14	25	14	25
SB THRU	0	0	0	0	0	0	0	0	0	0	0
SB RIGHT	0	0	10	10	0	10	0	10	10	10	10
TOTALS	1171	82	99	1352	46	1398	410	1762	1808	1694	1740

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Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TM	19-Jun-23	PIXI5AMG-0001	2	OF 2

E/W STREET : MOJAVE DRIVE
CONDITION : AM PEAK HOUR

N/S STREET : MESA LINDA AVENUE
PHF : 0.93

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
10	0	5	0	0	0	0	0	0	0	0	0
6	0	12	0	0	0	0	0	0	0	0	0
10	0	15	0	0	0	0	0	0	0	0	0
5	0	6	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced Totals
--	------------------	-----------------	-------------------	---------------	--------------------

MOJAVE DRIVE

EB LEFT	0	0	0	0	0
EB THRU	19	465	484	500	500
EB RIGHT	1	17	18	19	19
WB LEFT	0	26	26	26	26
WB THRU	20	509	529	533	555
WB RIGHT	0	0	0	0	0

MESA LINDA AVENUE

NB LEFT	0	38	38	38	40
NB THRU	0	0	0	0	0
NB RIGHT	0	31	31	31	31
SB LEFT	0	0	0	0	0
SB THRU	0	0	0	0	0
SB RIGHT	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	130	6	0	2	0	0	1	0	0	0	0
0	116	10	0	3	0	0	6	0	0	0	0
0	129	5	0	2	0	0	2	0	0	2	0
0	134	5	0	2	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
5	104	0	0	1	0	0	3	0	0	1	0
7	118	0	1	3	0	0	2	0	0	0	0
0	134	0	0	1	0	0	2	0	0	0	0
5	109	0	0	3	0	0	3	0	0	0	0

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Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↗	↗↗		↗	↗			↔↔	
Traffic Vol, veh/h	0	500	19	26	555	0	40	0	31	0	0	0
Future Vol, veh/h	0	500	19	26	555	0	40	0	31	0	0	0
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	-	-	-	250	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	538	20	28	597	0	43	0	33	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	597	0	0	558	0	0	903	1201	279	922	1211	299
Stage 1	-	-	-	-	-	-	548	548	-	653	653	-
Stage 2	-	-	-	-	-	-	355	653	-	269	558	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	989	-	-	1023	-	-	236	186	724	228	184	703
Stage 1	-	-	-	-	-	-	493	520	-	427	467	-
Stage 2	-	-	-	-	-	-	641	467	-	719	515	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	989	-	-	1023	-	-	231	181	724	213	179	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	231	181	-	213	179	-
Stage 1	-	-	-	-	-	-	493	520	-	427	454	-
Stage 2	-	-	-	-	-	-	623	454	-	686	515	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			18			0		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	231	724	989	-	-	1023	-	-	-
HCM Lane V/C Ratio	0.186	0.046	-	-	-	0.027	-	-	-
HCM Control Delay (s)	24.1	10.2	0	-	-	8.6	-	-	0
HCM Lane LOS	C	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.7	0.1	0	-	-	0.1	-	-	-

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	535	26	33	599	0	57	0	35	14	0	10
Future Volume (veh/h)	43	535	26	33	599	0	57	0	35	14	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	46	575	28	35	644	0	61	0	38	15	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	1352	66	44	1367	0	692	0	661	663	0	661
Arrive On Green	0.03	0.41	0.41	0.03	0.40	0.00	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3319	161	1714	3510	0	1426	0	1525	1391	0	1525
Grp Volume(v), veh/h	46	296	307	35	644	0	61	0	38	15	0	11
Grp Sat Flow(s),veh/h/ln	1714	1710	1771	1714	1710	0	1426	0	1525	1391	0	1525
Q Serve(g_s), s	2.4	11.2	11.2	1.8	12.5	0.0	2.3	0.0	1.3	0.6	0.0	0.4
Cycle Q Clear(g_c), s	2.4	11.2	11.2	1.8	12.5	0.0	2.7	0.0	1.3	1.9	0.0	0.4
Prop In Lane	1.00		0.09	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	697	722	44	1367	0	692	0	661	663	0	661
V/C Ratio(X)	0.80	0.42	0.43	0.79	0.47	0.00	0.09	0.00	0.06	0.02	0.00	0.02
Avail Cap(c_a), veh/h	133	697	722	114	1367	0	692	0	661	663	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	19.1	19.1	43.6	20.0	0.0	15.3	0.0	14.8	15.4	0.0	14.6
Incr Delay (d2), s/veh	21.9	1.9	1.8	25.6	1.2	0.0	0.3	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	4.4	1.0	4.6	0.0	0.8	0.0	0.5	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	21.0	21.0	69.2	21.1	0.0	15.6	0.0	15.0	15.4	0.0	14.6
LnGrp LOS	E	C	C	E	C	A	B	A	B	B	A	B
Approach Vol, veh/h	649			679			99			26		
Approach Delay, s/veh	24.1			23.6			15.3			15.1		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	40.7		43.0	7.0	40.0		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	33.0		39.0	7.0	32.0		39.0				
Max Q Clear Time (g_c+I1), s	3.8	13.2		3.9	4.4	14.5		4.7				
Green Ext Time (p_c), s	0.0	2.9		0.1	0.0	3.5		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				23.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	535	26	33	599	35	57	0	35	25	0	10
Future Volume (veh/h)	43	535	26	33	599	35	57	0	35	25	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	46	575	28	35	644	38	61	0	38	27	0	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	1352	66	44	1312	77	692	0	661	663	0	661
Arrive On Green	0.03	0.41	0.41	0.03	0.40	0.40	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3319	161	1714	3282	193	1426	0	1525	1391	0	1525
Grp Volume(v), veh/h	46	296	307	35	335	347	61	0	38	27	0	11
Grp Sat Flow(s),veh/h/ln	1714	1710	1771	1714	1710	1765	1426	0	1525	1391	0	1525
Q Serve(g_s), s	2.4	11.2	11.2	1.8	13.2	13.2	2.3	0.0	1.3	1.0	0.0	0.4
Cycle Q Clear(g_c), s	2.4	11.2	11.2	1.8	13.2	13.2	2.7	0.0	1.3	2.3	0.0	0.4
Prop In Lane	1.00		0.09	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	697	722	44	684	706	692	0	661	663	0	661
V/C Ratio(X)	0.80	0.42	0.43	0.79	0.49	0.49	0.09	0.00	0.06	0.04	0.00	0.02
Avail Cap(c_a), veh/h	133	697	722	114	684	706	692	0	661	663	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	19.1	19.1	43.6	20.2	20.2	15.3	0.0	14.8	15.5	0.0	14.6
Incr Delay (d2), s/veh	21.9	1.9	1.8	25.6	2.5	2.4	0.3	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	4.4	1.0	5.1	5.2	0.8	0.0	0.5	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	21.0	21.0	69.2	22.7	22.6	15.6	0.0	15.0	15.6	0.0	14.6
LnGrp LOS	E	C	C	E	C	C	B	A	B	B	A	B
Approach Vol, veh/h	649			717			99			38		
Approach Delay, s/veh	24.1			24.9			15.3			15.3		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	40.7		43.0	7.0	40.0		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	33.0		39.0	7.0	32.0		39.0				
Max Q Clear Time (g_c+I1), s	3.8	13.2		4.3	4.4	15.2		4.7				
Green Ext Time (p_c), s	0.0	2.9		0.1	0.0	3.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	23.7											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	710	33	42	793	0	71	0	46	14	0	10
Future Volume (veh/h)	43	710	33	42	793	0	71	0	46	14	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	45	747	35	44	835	0	75	0	48	15	0	11
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	1335	63	55	1370	0	692	0	661	652	0	661
Arrive On Green	0.03	0.40	0.40	0.03	0.40	0.00	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3326	156	1714	3510	0	1426	0	1525	1379	0	1525
Grp Volume(v), veh/h	45	384	398	44	835	0	75	0	48	15	0	11
Grp Sat Flow(s),veh/h/ln	1714	1710	1772	1714	1710	0	1426	0	1525	1379	0	1525
Q Serve(g_s), s	2.3	15.6	15.6	2.3	17.4	0.0	2.9	0.0	1.7	0.6	0.0	0.4
Cycle Q Clear(g_c), s	2.3	15.6	15.6	2.3	17.4	0.0	3.2	0.0	1.7	2.2	0.0	0.4
Prop In Lane	1.00		0.09	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	686	711	55	1370	0	692	0	661	652	0	661
V/C Ratio(X)	0.80	0.56	0.56	0.80	0.61	0.00	0.11	0.00	0.07	0.02	0.00	0.02
Avail Cap(c_a), veh/h	114	686	711	114	1370	0	692	0	661	652	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	20.8	20.8	43.3	21.4	0.0	15.5	0.0	14.9	15.6	0.0	14.6
Incr Delay (d2), s/veh	22.6	3.3	3.2	23.2	2.0	0.0	0.3	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.1	6.3	1.3	6.5	0.0	0.9	0.0	0.6	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	24.1	24.0	66.5	23.4	0.0	15.8	0.0	15.1	15.6	0.0	14.6
LnGrp LOS	E	C	C	E	C	A	B	A	B	B	A	B
Approach Vol, veh/h	827			879			123			26		
Approach Delay, s/veh	26.3			25.6			15.5			15.2		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	40.1		43.0	6.9	40.1		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	33.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	4.3	17.6		4.2	4.3	19.4		5.2				
Green Ext Time (p_c), s	0.0	3.7		0.1	0.0	4.2		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				25.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	710	33	42	793	35	71	0	46	25	0	10
Future Volume (veh/h)	43	710	33	42	793	35	71	0	46	25	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	45	747	35	44	835	37	75	0	48	26	0	11
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	1335	63	55	1336	59	692	0	661	652	0	661
Arrive On Green	0.03	0.40	0.40	0.03	0.40	0.40	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3326	156	1714	3336	148	1426	0	1525	1379	0	1525
Grp Volume(v), veh/h	45	384	398	44	428	444	75	0	48	26	0	11
Grp Sat Flow(s),veh/h/ln	1714	1710	1772	1714	1710	1773	1426	0	1525	1379	0	1525
Q Serve(g_s), s	2.3	15.6	15.6	2.3	18.0	18.0	2.9	0.0	1.7	1.0	0.0	0.4
Cycle Q Clear(g_c), s	2.3	15.6	15.6	2.3	18.0	18.0	3.2	0.0	1.7	2.7	0.0	0.4
Prop In Lane	1.00		0.09	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	686	711	55	685	711	692	0	661	652	0	661
V/C Ratio(X)	0.80	0.56	0.56	0.80	0.62	0.62	0.11	0.00	0.07	0.04	0.00	0.02
Avail Cap(c_a), veh/h	114	686	711	114	685	711	692	0	661	652	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	20.8	20.8	43.3	21.6	21.6	15.5	0.0	14.9	15.7	0.0	14.6
Incr Delay (d2), s/veh	22.6	3.3	3.2	23.2	4.3	4.1	0.3	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.1	6.3	1.3	7.1	7.3	0.9	0.0	0.6	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	24.1	24.0	66.5	25.8	25.7	15.8	0.0	15.1	15.8	0.0	14.6
LnGrp LOS	E	C	C	E	C	C	B	A	B	B	A	B
Approach Vol, veh/h	827			916			123			37		
Approach Delay, s/veh	26.3			27.7			15.5			15.5		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	40.1		43.0	6.9	40.1		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	33.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	4.3	17.6		4.7	4.3	20.0		5.2				
Green Ext Time (p_c), s	0.0	3.7		0.1	0.0	3.9		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				26.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	677	40	62	755	0	54	0	39	14	0	10
Future Volume (veh/h)	43	677	40	62	755	0	54	0	39	14	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	45	713	42	65	795	0	57	0	41	15	0	11
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	1265	74	82	1370	0	692	0	661	660	0	661
Arrive On Green	0.03	0.39	0.39	0.05	0.40	0.00	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3282	193	1714	3510	0	1426	0	1525	1388	0	1525
Grp Volume(v), veh/h	45	371	384	65	795	0	57	0	41	15	0	11
Grp Sat Flow(s),veh/h/ln	1714	1710	1765	1714	1710	0	1426	0	1525	1388	0	1525
Q Serve(g_s), s	2.3	15.3	15.4	3.4	16.3	0.0	2.1	0.0	1.4	0.6	0.0	0.4
Cycle Q Clear(g_c), s	2.3	15.3	15.4	3.4	16.3	0.0	2.5	0.0	1.4	2.0	0.0	0.4
Prop In Lane	1.00		0.11	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	659	680	82	1370	0	692	0	661	660	0	661
V/C Ratio(X)	0.80	0.56	0.56	0.79	0.58	0.00	0.08	0.00	0.06	0.02	0.00	0.02
Avail Cap(c_a), veh/h	114	659	680	114	1370	0	692	0	661	660	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	21.7	21.7	42.4	21.1	0.0	15.3	0.0	14.8	15.4	0.0	14.6
Incr Delay (d2), s/veh	22.6	3.5	3.4	21.6	1.8	0.0	0.2	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.0	6.2	1.8	6.0	0.0	0.7	0.0	0.5	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	25.2	25.1	64.0	22.9	0.0	15.5	0.0	15.0	15.5	0.0	14.6
LnGrp LOS	E	C	C	E	C	A	B	A	B	B	A	B
Approach Vol, veh/h	800			860			98			26		
Approach Delay, s/veh	27.4			26.0			15.3			15.1		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	38.7		43.0	6.9	40.1		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	33.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	5.4	17.4		4.0	4.3	18.3		4.5				
Green Ext Time (p_c), s	0.0	3.5		0.1	0.0	4.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				25.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	677	40	62	755	35	54	0	39	25	0	10
Future Volume (veh/h)	43	677	40	62	755	35	54	0	39	25	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	45	713	42	65	795	37	57	0	41	26	0	11
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	1265	74	82	1333	62	692	0	661	660	0	661
Arrive On Green	0.03	0.39	0.39	0.05	0.40	0.40	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3282	193	1714	3327	155	1426	0	1525	1388	0	1525
Grp Volume(v), veh/h	45	371	384	65	409	423	57	0	41	26	0	11
Grp Sat Flow(s),veh/h/ln	1714	1710	1765	1714	1710	1772	1426	0	1525	1388	0	1525
Q Serve(g_s), s	2.3	15.3	15.4	3.4	16.9	16.9	2.1	0.0	1.4	1.0	0.0	0.4
Cycle Q Clear(g_c), s	2.3	15.3	15.4	3.4	16.9	16.9	2.5	0.0	1.4	2.4	0.0	0.4
Prop In Lane	1.00		0.11	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	56	659	680	82	685	710	692	0	661	660	0	661
V/C Ratio(X)	0.80	0.56	0.56	0.79	0.60	0.60	0.08	0.00	0.06	0.04	0.00	0.02
Avail Cap(c_a), veh/h	114	659	680	114	685	710	692	0	661	660	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	21.7	21.7	42.4	21.2	21.2	15.3	0.0	14.8	15.6	0.0	14.6
Incr Delay (d2), s/veh	22.6	3.5	3.4	21.6	3.8	3.7	0.2	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.0	6.2	1.8	6.6	6.8	0.7	0.0	0.5	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	25.2	25.1	64.0	25.0	24.9	15.5	0.0	15.0	15.7	0.0	14.6
LnGrp LOS	E	C	C	E	C	C	B	A	B	B	A	B
Approach Vol, veh/h		800			897			98			37	
Approach Delay, s/veh		27.4			27.8			15.3			15.3	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	38.7		43.0	6.9	40.1		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	6.0	33.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	5.4	17.4		4.4	4.3	18.9		4.5				
Green Ext Time (p_c), s	0.0	3.5		0.1	0.0	3.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1	OF 2

E/W STREET : MOJAVE DRIVE
N/S STREET : MESA LINDA AVENUE
CONDITION : PM PEAK HOUR

INTERSECTION : 3
PROJECTED GROWTH : 3.5%
PER YEAR :

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Other Area Development	Background Condition	Project Trips	Background + Project Condition	Year 2034 Ambient Growth	Future Background Condition	Future Background + Project Condition	Future Year 2044 Condition	Future Year 2044 + Project Condition
Scenario #	2			4		6		8	10	12	14

MOJAVE DRIVE

EB LEFT	0	0	19	19	0	19	0	19	19	19	19
EB THRU	620	43	0	663	0	663	217	880	880	830	830
EB RIGHT	29	2	15	46	0	46	10	56	56	46	46
WB LEFT	31	2	15	48	0	48	11	59	59	72	72
WB THRU	584	41	17	642	0	642	204	846	846	838	838
WB RIGHT	0	0	0	0	14	14	0	0	14	0	14

MESA LINDA AVENUE

NB LEFT	32	2	9	43	0	43	11	54	54	53	53
NB THRU	0	0	0	0	0	0	0	0	0	0	0
NB RIGHT	27	2	2	31	0	31	9	40	40	62	62
SB LEFT	0	0	52	52	34	86	0	52	86	52	86
SB THRU	0	0	0	0	0	0	0	0	0	0	0
SB RIGHT	0	0	33	33	0	33	0	33	33	33	33
TOTALS	1323	92	162	1577	48	1625	462	2039	2087	2005	2053

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TM	19-Jun-23	PIXI5AMG-0001	2	OF 2

E/W STREET : MOJAVE DRIVE
CONDITION : PM PEAK HOUR

N/S STREET : MESA LINDA AVENUE
PHF : 0.96

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
5	0	10	0	0	0	0	0	0	0	0	0
6	0	5	0	0	0	0	0	0	0	0	0
8	0	6	0	0	0	0	0	0	0	0	0
8	0	11	0	0	0	0	0	0	0	0	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced Totals
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MOJAVE DRIVE

EB LEFT	0	0	0	0	0
EB THRU	8	602	610	616	620
EB RIGHT	0	29	29	29	29
WB LEFT	0	30	30	30	31
WB THRU	11	554	565	566	584
WB RIGHT	0	0	0	0	0

MESA LINDA AVENUE

NB LEFT	0	32	32	32	32
NB THRU	0	0	0	0	0
NB RIGHT	0	27	27	27	27
SB LEFT	0	0	0	0	0
SB THRU	0	0	0	0	0
SB RIGHT	0	0	0	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	139	11	0	1	0	0	1	0	0	0	0
0	136	8	0	2	0	0	2	0	0	0	0
0	148	5	0	1	0	0	2	0	0	0	0
0	131	6	0	1	0	0	1	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
11	142	0	0	0	0	0	2	0	0	0	0
7	148	0	0	3	0	0	0	0	0	0	0
6	158	0	0	2	0	0	0	0	0	0	0
5	154	0	0	0	0	0	1	0	0	0	0

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Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↗	↗↔		↗	↗			↔↔	
Traffic Vol, veh/h	0	620	29	31	584	0	32	0	27	0	0	0
Future Vol, veh/h	0	620	29	31	584	0	32	0	27	0	0	0
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	-	-	-	250	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	646	30	32	608	0	33	0	28	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	608	0	0	676	0	0	1029	1333	338	995	1348	304
Stage 1	-	-	-	-	-	-	661	661	-	672	672	-
Stage 2	-	-	-	-	-	-	368	672	-	323	676	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	980	-	-	925	-	-	191	155	664	202	152	698
Stage 1	-	-	-	-	-	-	423	463	-	416	458	-
Stage 2	-	-	-	-	-	-	630	458	-	669	456	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	980	-	-	925	-	-	186	150	664	188	147	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	186	150	-	188	147	-
Stage 1	-	-	-	-	-	-	423	463	-	416	442	-
Stage 2	-	-	-	-	-	-	608	442	-	641	456	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.5			20.4			0		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	186	664	980	-	-	925	-	-	-			
HCM Lane V/C Ratio	0.179	0.042	-	-	-	0.035	-	-	-			
HCM Control Delay (s)	28.5	10.7	0	-	-	9	-	-	0			
HCM Lane LOS	D	B	A	-	-	A	-	-	A			
HCM 95th %tile Q(veh)	0.6	0.1	0	-	-	0.1	-	-	-			

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	663	46	48	642	0	43	0	31	52	0	33
Future Volume (veh/h)	19	663	46	48	642	0	43	0	31	52	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	20	691	48	50	669	0	45	0	32	54	0	34
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	1287	89	63	1422	0	667	0	661	669	0	661
Arrive On Green	0.02	0.40	0.40	0.04	0.42	0.00	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3244	225	1714	3510	0	1396	0	1525	1399	0	1525
Grp Volume(v), veh/h	20	364	375	50	669	0	45	0	32	54	0	34
Grp Sat Flow(s),veh/h/ln	1714	1710	1759	1714	1710	0	1396	0	1525	1399	0	1525
Q Serve(g_s), s	1.0	14.7	14.7	2.6	12.8	0.0	1.7	0.0	1.1	2.1	0.0	1.2
Cycle Q Clear(g_c), s	1.0	14.7	14.7	2.6	12.8	0.0	2.9	0.0	1.1	3.2	0.0	1.2
Prop In Lane	1.00		0.13	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	678	698	63	1422	0	667	0	661	669	0	661
V/C Ratio(X)	0.67	0.54	0.54	0.80	0.47	0.00	0.07	0.00	0.05	0.08	0.00	0.05
Avail Cap(c_a), veh/h	114	678	698	133	1422	0	667	0	661	669	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	20.8	20.8	43.0	19.1	0.0	15.6	0.0	14.8	15.7	0.0	14.8
Incr Delay (d2), s/veh	22.6	3.0	3.0	19.9	1.1	0.0	0.2	0.0	0.1	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.7	5.9	1.4	4.6	0.0	0.6	0.0	0.4	0.7	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	23.8	23.8	63.0	20.2	0.0	15.8	0.0	14.9	15.9	0.0	14.9
LnGrp LOS	E	C	C	E	C	A	B	A	B	B	A	B
Approach Vol, veh/h	759			719			77			88		
Approach Delay, s/veh	24.9			23.2			15.4			15.5		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	39.7		43.0	5.6	41.4		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	32.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	4.6	16.7		5.2	3.0	14.8		4.9				
Green Ext Time (p_c), s	0.0	3.4		0.3	0.0	3.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				23.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	663	46	48	642	14	43	0	31	86	0	33
Future Volume (veh/h)	19	663	46	48	642	14	43	0	31	86	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	20	691	48	50	669	15	45	0	32	90	0	34
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	1287	89	63	1422	32	667	0	661	669	0	661
Arrive On Green	0.02	0.40	0.40	0.04	0.42	0.42	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3244	225	1714	3420	77	1396	0	1525	1399	0	1525
Grp Volume(v), veh/h	20	364	375	50	334	350	45	0	32	90	0	34
Grp Sat Flow(s),veh/h/ln	1714	1710	1759	1714	1710	1786	1396	0	1525	1399	0	1525
Q Serve(g_s), s	1.0	14.7	14.7	2.6	12.8	12.8	1.7	0.0	1.1	3.6	0.0	1.2
Cycle Q Clear(g_c), s	1.0	14.7	14.7	2.6	12.8	12.8	2.9	0.0	1.1	4.7	0.0	1.2
Prop In Lane	1.00		0.13	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	678	698	63	711	743	667	0	661	669	0	661
V/C Ratio(X)	0.67	0.54	0.54	0.80	0.47	0.47	0.07	0.00	0.05	0.13	0.00	0.05
Avail Cap(c_a), veh/h	114	678	698	133	711	743	667	0	661	669	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	20.8	20.8	43.0	19.1	19.1	15.6	0.0	14.8	16.1	0.0	14.8
Incr Delay (d2), s/veh	22.6	3.0	3.0	19.9	2.2	2.1	0.2	0.0	0.1	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.7	5.9	1.4	4.8	5.0	0.6	0.0	0.4	1.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	23.8	23.8	63.0	21.3	21.2	15.8	0.0	14.9	16.5	0.0	14.9
LnGrp LOS	E	C	C	E	C	C	B	A	B	B	A	B
Approach Vol, veh/h	759			734			77			124		
Approach Delay, s/veh	24.9			24.1			15.4			16.1		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	39.7		43.0	5.6	41.4		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	32.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	4.6	16.7		6.7	3.0	14.8		4.9				
Green Ext Time (p_c), s	0.0	3.4		0.4	0.0	3.3		0.3				
Intersection Summary												
HCM 6th Ctrl Delay	23.5											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	880	56	59	846	0	54	0	40	52	0	33
Future Volume (veh/h)	19	880	56	59	846	0	54	0	40	52	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	20	917	58	61	881	0	56	0	42	54	0	34
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	1268	80	77	1422	0	667	0	661	659	0	661
Arrive On Green	0.02	0.39	0.39	0.05	0.42	0.00	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3266	207	1714	3510	0	1396	0	1525	1386	0	1525
Grp Volume(v), veh/h	20	480	495	61	881	0	56	0	42	54	0	34
Grp Sat Flow(s),veh/h/ln	1714	1710	1763	1714	1710	0	1396	0	1525	1386	0	1525
Q Serve(g_s), s	1.0	21.5	21.5	3.2	18.2	0.0	2.2	0.0	1.4	2.1	0.0	1.2
Cycle Q Clear(g_c), s	1.0	21.5	21.5	3.2	18.2	0.0	3.3	0.0	1.4	3.6	0.0	1.2
Prop In Lane	1.00		0.12	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	664	684	77	1422	0	667	0	661	659	0	661
V/C Ratio(X)	0.67	0.72	0.72	0.79	0.62	0.00	0.08	0.00	0.06	0.08	0.00	0.05
Avail Cap(c_a), veh/h	114	664	684	133	1422	0	667	0	661	659	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	23.4	23.4	42.5	20.7	0.0	15.7	0.0	14.9	15.9	0.0	14.8
Incr Delay (d2), s/veh	22.6	6.7	6.5	16.1	2.0	0.0	0.2	0.0	0.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.8	9.0	1.6	6.7	0.0	0.7	0.0	0.5	0.7	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	30.1	29.9	58.7	22.7	0.0	16.0	0.0	15.0	16.1	0.0	14.9
LnGrp LOS	E	C	C	E	C	A	B	A	B	B	A	B
Approach Vol, veh/h	995			942			98			88		
Approach Delay, s/veh	30.8			25.0			15.6			15.7		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	38.9		43.0	5.6	41.4		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	32.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	5.2	23.5		5.6	3.0	20.2		5.3				
Green Ext Time (p_c), s	0.0	3.4		0.3	0.0	4.3		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				26.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	880	56	59	846	14	54	0	40	86	0	33
Future Volume (veh/h)	19	880	56	59	846	14	54	0	40	86	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	20	917	58	61	881	15	56	0	42	90	0	34
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	1268	80	77	1431	24	667	0	661	659	0	661
Arrive On Green	0.02	0.39	0.39	0.05	0.42	0.42	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3266	207	1714	3441	59	1396	0	1525	1386	0	1525
Grp Volume(v), veh/h	20	480	495	61	438	458	56	0	42	90	0	34
Grp Sat Flow(s),veh/h/ln	1714	1710	1763	1714	1710	1789	1396	0	1525	1386	0	1525
Q Serve(g_s), s	1.0	21.5	21.5	3.2	18.1	18.1	2.2	0.0	1.4	3.6	0.0	1.2
Cycle Q Clear(g_c), s	1.0	21.5	21.5	3.2	18.1	18.1	3.3	0.0	1.4	5.1	0.0	1.2
Prop In Lane	1.00		0.12	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	664	684	77	711	744	667	0	661	659	0	661
V/C Ratio(X)	0.67	0.72	0.72	0.79	0.62	0.62	0.08	0.00	0.06	0.14	0.00	0.05
Avail Cap(c_a), veh/h	114	664	684	133	711	744	667	0	661	659	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	23.4	23.4	42.5	20.6	20.6	15.7	0.0	14.9	16.3	0.0	14.8
Incr Delay (d2), s/veh	22.6	6.7	6.5	16.1	4.0	3.8	0.2	0.0	0.2	0.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.8	9.0	1.6	7.0	7.3	0.7	0.0	0.5	1.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	30.1	29.9	58.7	24.6	24.4	16.0	0.0	15.0	16.8	0.0	14.9
LnGrp LOS	E	C	C	E	C	C	B	A	B	B	A	B
Approach Vol, veh/h	995			957			98			124		
Approach Delay, s/veh	30.8			26.7			15.6			16.3		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	38.9		43.0	5.6	41.4		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	32.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	5.2	23.5		7.1	3.0	20.1		5.3				
Green Ext Time (p_c), s	0.0	3.4		0.4	0.0	3.9		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				27.5								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	830	46	72	838	0	53	0	62	52	0	33
Future Volume (veh/h)	19	830	46	72	838	0	53	0	62	52	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	20	865	48	75	873	0	55	0	65	54	0	34
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	1245	69	95	1422	0	667	0	661	634	0	661
Arrive On Green	0.02	0.38	0.38	0.06	0.42	0.00	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3294	183	1714	3510	0	1396	0	1525	1358	0	1525
Grp Volume(v), veh/h	20	449	464	75	873	0	55	0	65	54	0	34
Grp Sat Flow(s),veh/h/ln	1714	1710	1767	1714	1710	0	1396	0	1525	1358	0	1525
Q Serve(g_s), s	1.0	19.9	19.9	3.9	18.0	0.0	2.1	0.0	2.3	2.2	0.0	1.2
Cycle Q Clear(g_c), s	1.0	19.9	19.9	3.9	18.0	0.0	3.3	0.0	2.3	4.5	0.0	1.2
Prop In Lane	1.00		0.10	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	646	668	95	1422	0	667	0	661	634	0	661
V/C Ratio(X)	0.67	0.69	0.70	0.79	0.61	0.00	0.08	0.00	0.10	0.09	0.00	0.05
Avail Cap(c_a), veh/h	114	646	668	133	1422	0	667	0	661	634	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	23.6	23.6	42.0	20.6	0.0	15.7	0.0	15.1	16.4	0.0	14.8
Incr Delay (d2), s/veh	22.6	6.1	5.9	18.5	2.0	0.0	0.2	0.0	0.3	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.1	8.3	2.0	6.6	0.0	0.7	0.0	0.8	0.7	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	29.7	29.5	60.5	22.6	0.0	16.0	0.0	15.4	16.7	0.0	14.9
LnGrp LOS	E	C	C	E	C	A	B	A	B	B	A	B
Approach Vol, veh/h	933			948			120			88		
Approach Delay, s/veh	30.4			25.6			15.7			16.0		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	38.0		43.0	5.6	41.4		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	32.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	5.9	21.9		6.5	3.0	20.0		5.3				
Green Ext Time (p_c), s	0.0	3.5		0.3	0.0	4.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				26.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

3: Mesa Linda Ave & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	830	46	72	838	14	53	0	62	86	0	33
Future Volume (veh/h)	19	830	46	72	838	14	53	0	62	86	0	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	20	865	48	75	873	15	55	0	65	90	0	34
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	1245	69	95	1431	25	667	0	661	634	0	661
Arrive On Green	0.02	0.38	0.38	0.06	0.42	0.42	0.43	0.00	0.43	0.43	0.00	0.43
Sat Flow, veh/h	1714	3294	183	1714	3440	59	1396	0	1525	1358	0	1525
Grp Volume(v), veh/h	20	449	464	75	434	454	55	0	65	90	0	34
Grp Sat Flow(s),veh/h/ln	1714	1710	1767	1714	1710	1789	1396	0	1525	1358	0	1525
Q Serve(g_s), s	1.0	19.9	19.9	3.9	17.9	17.9	2.1	0.0	2.3	3.8	0.0	1.2
Cycle Q Clear(g_c), s	1.0	19.9	19.9	3.9	17.9	17.9	3.3	0.0	2.3	6.1	0.0	1.2
Prop In Lane	1.00		0.10	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	30	646	668	95	711	744	667	0	661	634	0	661
V/C Ratio(X)	0.67	0.69	0.70	0.79	0.61	0.61	0.08	0.00	0.10	0.14	0.00	0.05
Avail Cap(c_a), veh/h	114	646	668	133	711	744	667	0	661	634	0	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	23.6	23.6	42.0	20.6	20.6	15.7	0.0	15.1	16.9	0.0	14.8
Incr Delay (d2), s/veh	22.6	6.1	5.9	18.5	3.9	3.7	0.2	0.0	0.3	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	8.1	8.3	2.0	6.9	7.2	0.7	0.0	0.8	1.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	29.7	29.5	60.5	24.5	24.3	16.0	0.0	15.4	17.4	0.0	14.9
LnGrp LOS	E	C	C	E	C	C	B	A	B	B	A	B
Approach Vol, veh/h	933			963			120			124		
Approach Delay, s/veh	30.4			27.2			15.7			16.7		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	38.0		43.0	5.6	41.4		43.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	32.0		39.0	6.0	33.0		39.0				
Max Q Clear Time (g_c+I1), s	5.9	21.9		8.1	3.0	19.9		5.3				
Green Ext Time (p_c), s	0.0	3.5		0.4	0.0	3.9		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				27.3								
HCM 6th LOS				C								

**CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM
FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)**

Intersection No.: 3
North/South Street: MESA LINDA AVENUE
East/West Street: MOJAVE DRIVE

Analysis Condition: YEAR 2044 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction			Forecast Future Year				
			Link Volume		Turn Volume		Balanced Volume
South leg NB	Left	40	Approach	106	Left	40	40
	Through	0	Departure	66	Through	0	0
	Right	31			Right	37	37
North leg SB	Left	0	Approach	46	Left	0	0
	Through	0	Departure	119	Through	0	0
	Right	0			Right	0	0
West leg EB	Left	0	Approach	711	Left	0	0
	Through	500	Departure	595	Through	494	677
	Right	19			Right	25	34
East leg WB	Left	26	Approach	831	Left	41	57
	Through	555	Departure	531	Through	555	750
	Right	0			Right	0	0

P.M. Peak Hour

Approach Direction			Forecast Future Year				
			Link Volume		Turn Volume		Balanced Volume
South leg NB	Left	32	Approach	95	Left	44	44
	Through	0	Departure	88	Through	0	0
	Right	27			Right	58	60
North leg SB	Left	0	Approach	166	Left	0	0
	Through	0	Departure	67	Through	0	0
	Right	0			Right	0	0
West leg EB	Left	0	Approach	758	Left	0	0
	Through	620	Departure	865	Through	799	830
	Right	29			Right	31	31
East leg WB	Left	31	Approach	834	Left	57	57
	Through	584	Departure	857	Through	821	821



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1	OF 2

E/W STREET : MOJAVE DRIVE

N/S STREET : HIGHWAY 395

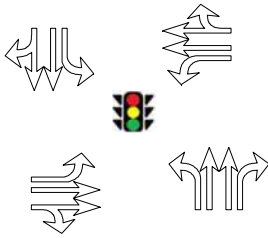
CONDITION : AM PEAK HOUR

INTERSECTION : 4

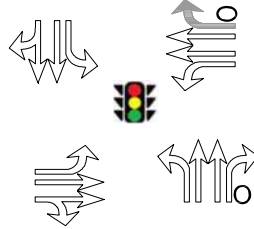
PROJECTED GROWTH : 3.5%

PER YEAR :

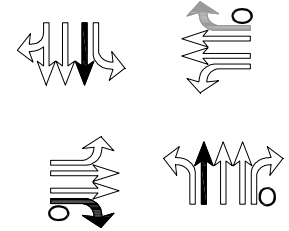
CONDITION DIAGRAMS



EXISTING GEOMETRICS



**BACKGROUND GEOMETRICS
BY MOJAVE 68 PROJECT**



**FUTURE GEOMETRICS
BY MOJAVE 68 PROJECT**

TURN MOVEMENTS

Condition	Existing Condition	Year 2024 Ambient Growth	Other Area Development	Background Condition	Project Trips	Background + Project Condition	Year 2034 Ambient Growth	Future Background Condition	Future Background + Project Condition	Future Year 2044 Condition	Future Year 2044 + Project Condition
Scenario #	1			3		5		7	9	11	13

MOJAVE DRIVE

EB LEFT	24	2	0	26	3	29	8	34	37	22	25
EB THRU	297	21	9	327	0	327	104	431	431	301	301
EB RIGHT	125	9	0	134	0	134	44	178	178	224	224
WB LEFT	58	4	16	78	0	78	20	98	98	179	179
WB THRU	309	22	3	334	0	334	108	442	442	294	294
WB RIGHT	228	16	10	254	0	254	80	334	334	345	345

HIGHWAY 395

NB LEFT	117	8	0	125	0	125	41	166	166	163	163
NB THRU	536	38	6	580	51	631	188	768	819	1172	1223
NB RIGHT	94	7	29	130	0	130	33	163	163	244	244
SB LEFT	128	9	11	148	0	148	45	193	193	215	215
SB THRU	593	42	2	637	16	653	208	845	861	1723	1739
SB RIGHT	37	3	0	40	1	41	13	53	54	36	37
TOTALS	2546	181	86	2813	71	2884	892	3705	3776	4918	4989

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TM	19-Jun-23	PIXI5AMG-0001	2	OF 2

E/W STREET : MOJAVE DRIVE
CONDITION : AM PEAK HOUR

N/S STREET : HIGHWAY 395
PHF : 0.92

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
3	100	32	0	3	0	1	0	1	0	16	0
14	110	33	0	1	0	0	0	2	0	12	0
7	106	30	1	0	0	0	0	0	0	16	0
9	97	26	0	0	0	0	0	0	0	14	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
22	96	24	1	2	0	0	1	1	0	12	0
26	105	29	1	4	0	0	0	0	0	12	0
19	102	31	1	0	0	0	3	0	0	11	0
19	94	28	0	1	2	1	0	0	0	5	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced Totals
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MOJAVE DRIVE

EB LEFT	2	20	22	24	24
EB THRU	10	276	286	293	297
EB RIGHT	0	125	125	125	125
WB LEFT	5	49	54	58	58
WB THRU	11	291	302	309	309
WB RIGHT	3	201	204	228	228

HIGHWAY 395

NB LEFT	3	112	115	117	117
NB THRU	51	397	448	536	536
NB RIGHT	4	86	90	93	94
SB LEFT	3	121	124	127	128
SB THRU	62	413	475	593	593
SB RIGHT	2	33	35	37	37

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
46	70	11	2	1	0	0	4	2	0	0	0
55	77	14	0	0	2	0	2	0	0	2	0
50	76	15	1	1	0	0	0	1	0	0	0
50	68	9	0	1	0	0	0	0	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
31	69	5	0	3	0	0	1	0	0	0	0
35	77	4	0	0	0	0	0	2	0	0	0
33	65	6	0	2	0	0	3	0	0	0	0
26	65	5	0	1	0	0	0	0	0	0	0

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Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/15/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	297	125	58	309	228	117	536	94	128	593	37
Future Volume (veh/h)	24	297	125	58	309	228	117	536	94	128	593	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	26	323	136	63	336	248	127	583	102	139	645	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	32	419	173	89	400	289	117	973	434	610	1889	117
Arrive On Green	0.02	0.18	0.18	0.05	0.21	0.21	0.07	0.28	0.28	0.36	0.58	0.58
Sat Flow, veh/h	1684	2360	974	1684	1893	1370	1684	3420	1525	1684	3271	203
Grp Volume(v), veh/h	26	232	227	63	303	281	127	583	102	139	337	348
Grp Sat Flow(s),veh/h/ln	1684	1710	1625	1684	1710	1553	1684	1710	1525	1684	1710	1764
Q Serve(g_s), s	2.0	16.8	17.3	4.8	22.1	22.7	9.0	19.1	5.6	7.5	13.5	13.5
Cycle Q Clear(g_c), s	2.0	16.8	17.3	4.8	22.1	22.7	9.0	19.1	5.6	7.5	13.5	13.5
Prop In Lane	1.00		0.60	1.00		0.88	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	32	303	288	89	361	328	117	973	434	610	988	1019
V/C Ratio(X)	0.82	0.77	0.79	0.71	0.84	0.86	1.09	0.60	0.23	0.23	0.34	0.34
Avail Cap(c_a), veh/h	220	539	512	220	539	490	117	973	434	610	988	1019
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	63.6	50.9	51.1	60.6	49.1	49.4	60.5	40.1	25.2	28.8	14.4	14.5
Incr Delay (d2), s/veh	38.0	4.0	4.7	9.9	7.3	9.5	109.4	2.7	1.3	0.2	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	7.2	7.2	2.2	9.7	9.3	7.3	8.0	2.5	2.9	5.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.6	54.9	55.9	70.5	56.5	58.9	169.9	42.8	26.4	29.0	15.3	15.3
LnGrp LOS	F	D	E	E	E	E	F	D	C	C	B	B
Approach Vol, veh/h	485			647			812			824		
Approach Delay, s/veh	57.9			58.9			60.6			17.6		
Approach LOS	E			E			E			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	51.1	41.0	10.9	27.1	13.0	79.1	6.4	31.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	19.0	37.0	17.0	41.0	9.0	47.0	17.0	41.0				
Max Q Clear Time (g_c+I1), s	9.5	21.1	6.8	19.3	11.0	15.5	4.0	24.7				
Green Ext Time (p_c), s	0.2	3.3	0.1	2.3	0.0	3.7	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	46.9											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	327	134	78	334	254	125	580	130	148	637	40
Future Volume (veh/h)	26	327	134	78	334	254	125	580	130	148	637	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	28	355	146	85	363	276	136	630	141	161	692	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	34	435	176	111	426	319	117	973	434	578	1828	114
Arrive On Green	0.02	0.18	0.18	0.07	0.23	0.23	0.07	0.28	0.28	0.34	0.56	0.56
Sat Flow, veh/h	1684	2376	961	1684	1863	1395	1684	3420	1525	1684	3270	203
Grp Volume(v), veh/h	28	254	247	85	333	306	136	630	141	161	362	373
Grp Sat Flow(s),veh/h/ln	1684	1710	1627	1684	1710	1549	1684	1710	1525	1684	1710	1763
Q Serve(g_s), s	2.2	18.5	19.0	6.5	24.2	24.7	9.0	21.0	7.8	9.0	15.4	15.4
Cycle Q Clear(g_c), s	2.2	18.5	19.0	6.5	24.2	24.7	9.0	21.0	7.8	9.0	15.4	15.4
Prop In Lane	1.00		0.59	1.00		0.90	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	34	313	298	111	390	354	117	973	434	578	956	986
V/C Ratio(X)	0.81	0.81	0.83	0.77	0.85	0.87	1.17	0.65	0.32	0.28	0.38	0.38
Avail Cap(c_a), veh/h	220	539	513	220	539	488	117	973	434	578	956	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	63.4	50.9	51.2	59.7	48.1	48.2	60.5	40.8	24.8	31.0	16.0	16.0
Incr Delay (d2), s/veh	34.9	5.0	5.9	10.5	9.3	11.5	135.0	3.3	2.0	0.2	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.0	7.9	3.0	10.9	10.3	8.1	8.9	3.6	3.5	5.7	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.3	56.0	57.1	70.3	57.3	59.7	195.5	44.1	26.8	31.2	17.1	17.1
LnGrp LOS	F	E	E	E	E	E	F	D	C	C	B	B
Approach Vol, veh/h	529			724			907			896		
Approach Delay, s/veh	58.7			59.9			64.1			19.6		
Approach LOS	E			E			E			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	48.7	41.0	12.5	27.8	13.0	76.7	6.7	33.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	19.0	37.0	17.0	41.0	9.0	47.0	17.0	41.0				
Max Q Clear Time (g_c+I1), s	11.0	23.0	8.5	21.0	11.0	17.4	4.2	26.7				
Green Ext Time (p_c), s	0.2	3.5	0.1	2.5	0.0	4.0	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	49.1											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	327	134	78	334	254	125	631	130	148	653	41
Future Volume (veh/h)	29	327	134	78	334	254	125	631	130	148	653	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	32	355	146	85	363	276	136	686	141	161	710	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	40	442	179	111	426	319	117	973	434	573	1815	115
Arrive On Green	0.02	0.19	0.19	0.07	0.23	0.23	0.07	0.28	0.28	0.34	0.56	0.56
Sat Flow, veh/h	1684	2376	961	1684	1863	1395	1684	3420	1525	1684	3266	207
Grp Volume(v), veh/h	32	254	247	85	333	306	136	686	141	161	372	383
Grp Sat Flow(s),veh/h/ln	1684	1710	1627	1684	1710	1549	1684	1710	1525	1684	1710	1763
Q Serve(g_s), s	2.5	18.4	18.9	6.5	24.2	24.7	9.0	23.3	7.8	9.1	16.0	16.1
Cycle Q Clear(g_c), s	2.5	18.4	18.9	6.5	24.2	24.7	9.0	23.3	7.8	9.1	16.0	16.1
Prop In Lane	1.00		0.59	1.00		0.90	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	40	318	303	111	390	354	117	973	434	573	950	980
V/C Ratio(X)	0.80	0.80	0.82	0.77	0.85	0.87	1.17	0.70	0.32	0.28	0.39	0.39
Avail Cap(c_a), veh/h	220	539	513	220	539	488	117	973	434	573	950	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	63.2	50.5	50.8	59.7	48.1	48.2	60.5	41.6	24.8	31.3	16.4	16.4
Incr Delay (d2), s/veh	29.9	4.6	5.3	10.5	9.3	11.5	135.0	4.3	2.0	0.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	8.0	7.8	3.0	10.9	10.3	8.1	9.9	3.6	3.6	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.1	55.1	56.1	70.3	57.3	59.7	195.5	45.9	26.8	31.5	17.5	17.5
LnGrp LOS	F	E	E	E	E	E	F	D	C	C	B	B
Approach Vol, veh/h	533			724			963			916		
Approach Delay, s/veh	57.8			59.9			64.2			19.9		
Approach LOS	E			E			E			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	48.2	41.0	12.5	28.2	13.0	76.2	7.1	33.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	48.0	37.0	17.0	41.0	9.0	47.0	17.0	41.0				
Max Q Clear Time (g_c+I1), s	11.1	25.3	8.5	20.9	11.0	18.1	4.5	26.7				
Green Ext Time (p_c), s	0.2	3.5	0.1	2.5	0.0	4.2	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay 49.2
HCM 6th LOS D

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	29	327	134	78	334	254	125	631	130	148	653	41
Future Volume (veh/h)	29	327	134	78	334	254	125	631	130	148	653	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	32	355	146	85	363	276	136	686	141	161	710	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	180	436	177	112	490	689	161	1054	572	519	1701	108
Arrive On Green	0.11	0.18	0.18	0.07	0.14	0.14	0.10	0.31	0.31	0.31	0.52	0.52
Sat Flow, veh/h	1684	2376	961	1684	3420	1525	1684	3420	1525	1684	3266	207
Grp Volume(v), veh/h	32	254	247	85	363	276	136	686	141	161	372	383
Grp Sat Flow(s),veh/h/ln	1684	1710	1627	1684	1710	1525	1684	1710	1525	1684	1710	1763
Q Serve(g_s), s	2.1	17.1	17.5	6.0	12.2	0.0	9.5	20.8	2.7	8.8	16.0	16.0
Cycle Q Clear(g_c), s	2.1	17.1	17.5	6.0	12.2	0.0	9.5	20.8	2.7	8.8	16.0	16.0
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	180	314	299	112	490	689	161	1055	572	519	890	918
V/C Ratio(X)	0.18	0.81	0.83	0.76	0.74	0.40	0.84	0.65	0.25	0.31	0.42	0.42
Avail Cap(c_a), veh/h	180	584	556	126	1197	1004	210	1055	572	519	890	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	48.8	47.0	47.1	55.1	49.3	22.0	53.4	35.9	10.8	31.7	17.6	17.6
Incr Delay (d2), s/veh	0.5	4.9	5.8	20.8	2.2	0.4	20.6	3.1	1.0	0.3	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.3	7.2	3.1	5.1	4.9	4.8	8.6	1.3	3.4	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	51.9	52.9	75.9	51.5	22.4	74.0	39.0	11.9	32.1	18.9	18.9
LnGrp LOS	D	D	D	E	D	C	E	D	B	C	B	B
Approach Vol, veh/h	533			724			963			916		
Approach Delay, s/veh	52.2			43.3			40.0			21.2		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	41.0	41.0	12.0	26.0	15.5	66.5	16.8	21.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	17.0	37.0	9.0	41.0	15.0	39.0	8.0	42.0				
Max Q Clear Time (g_c+I1), s	10.8	22.8	8.0	19.5	11.5	18.0	4.1	14.2				
Green Ext Time (p_c), s	0.2	3.8	0.0	2.5	0.1	3.9	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	37.3											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	431	178	98	442	334	166	768	163	193	845	53
Future Volume (veh/h)	34	431	178	98	442	334	166	768	163	193	845	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	36	454	187	103	465	352	175	808	172	203	889	56
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	555	227	128	526	397	199	1105	493	410	1466	92
Arrive On Green	0.03	0.23	0.23	0.08	0.28	0.28	0.12	0.32	0.32	0.24	0.45	0.45
Sat Flow, veh/h	1684	2368	968	1684	1857	1401	1684	3420	1525	1684	3267	206
Grp Volume(v), veh/h	36	327	314	103	428	389	175	808	172	203	465	480
Grp Sat Flow(s),veh/h/ln	1684	1710	1626	1684	1710	1548	1684	1710	1525	1684	1710	1763
Q Serve(g_s), s	2.8	23.5	23.9	7.8	31.1	31.3	13.3	27.2	8.9	13.5	26.8	26.8
Cycle Q Clear(g_c), s	2.8	23.5	23.9	7.8	31.1	31.3	13.3	27.2	8.9	13.5	26.8	26.8
Prop In Lane	1.00		0.60	1.00		0.91	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	45	400	381	128	485	439	199	1105	493	410	767	791
V/C Ratio(X)	0.80	0.82	0.83	0.81	0.88	0.89	0.88	0.73	0.35	0.49	0.61	0.61
Avail Cap(c_a), veh/h	104	539	513	155	592	536	233	1105	493	410	767	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	62.9	47.1	47.3	59.1	44.5	44.6	56.4	39.0	21.3	42.3	27.2	27.2
Incr Delay (d2), s/veh	26.7	7.0	8.0	22.0	12.8	14.3	26.8	4.3	1.9	0.7	2.7	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	10.3	10.1	4.0	14.2	13.1	6.9	11.5	4.1	5.5	10.8	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.6	54.2	55.2	81.1	57.4	58.9	83.2	43.3	23.3	43.0	29.9	29.8
LnGrp LOS	F	D	E	F	E	E	F	D	C	D	C	C
Approach Vol, veh/h		677			920			1155			1148	
Approach Delay, s/veh		56.5			60.7			46.3			32.2	
Approach LOS		E			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.7	46.0	13.9	34.4	19.4	62.3	7.5	40.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	19.0	42.0	12.0	41.0	18.0	43.0	8.0	45.0				
Max Q Clear Time (g_c+I1), s	15.5	29.2	9.8	25.9	15.3	28.8	4.8	33.3				
Green Ext Time (p_c), s	0.2	4.4	0.0	3.0	0.1	4.4	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay			47.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰↱	↰	↰	↰↱	
Traffic Volume (veh/h)	37	431	178	98	442	334	166	819	163	193	861	54
Future Volume (veh/h)	37	431	178	98	442	334	166	819	163	193	861	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	39	454	187	103	465	352	175	862	172	203	906	57
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	49	560	229	128	526	397	199	1105	493	407	1458	92
Arrive On Green	0.03	0.24	0.24	0.08	0.28	0.28	0.12	0.32	0.32	0.24	0.45	0.45
Sat Flow, veh/h	1684	2368	968	1684	1857	1401	1684	3420	1525	1684	3267	206
Grp Volume(v), veh/h	39	327	314	103	428	389	175	862	172	203	474	489
Grp Sat Flow(s),veh/h/ln	1684	1710	1626	1684	1710	1548	1684	1710	1525	1684	1710	1763
Q Serve(g_s), s	3.0	23.4	23.8	7.8	31.1	31.3	13.3	29.7	8.9	13.5	27.6	27.6
Cycle Q Clear(g_c), s	3.0	23.4	23.8	7.8	31.1	31.3	13.3	29.7	8.9	13.5	27.6	27.6
Prop In Lane	1.00		0.60	1.00		0.91	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	49	404	385	128	485	439	199	1105	493	407	763	787
V/C Ratio(X)	0.80	0.81	0.82	0.81	0.88	0.89	0.88	0.78	0.35	0.50	0.62	0.62
Avail Cap(c_a), veh/h	104	539	513	155	592	536	233	1105	493	407	763	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	62.7	46.8	47.0	59.1	44.5	44.6	56.4	39.8	21.3	42.5	27.6	27.6
Incr Delay (d2), s/veh	24.5	6.6	7.5	22.0	12.8	14.3	26.8	5.5	1.9	0.7	2.9	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.3	10.0	4.0	14.2	13.1	6.9	12.6	4.1	5.5	11.1	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.3	53.5	54.5	81.1	57.4	58.9	83.2	45.3	23.3	43.2	30.4	30.4
LnGrp LOS	F	D	D	F	E	E	F	D	C	D	C	C
Approach Vol, veh/h	680				920				1209		1166	
Approach Delay, s/veh	55.9				60.7				47.6		32.6	
Approach LOS	E				E				D		C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.4	46.0	13.9	34.7	19.4	62.0	7.8	40.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	42.0	42.0	12.0	41.0	18.0	43.0	8.0	45.0				
Max Q Clear Time (g_c+I1), s	31.7	31.7	9.8	25.8	15.3	29.6	5.0	33.3				
Green Ext Time (p_c), s	0.2	4.1	0.0	3.0	0.1	4.4	0.0	3.6				

Intersection Summary

HCM 6th Ctrl Delay 47.7

HCM 6th LOS D

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	431	178	98	442	334	166	819	163	193	861	54
Future Volume (veh/h)	37	431	178	98	442	334	166	819	163	193	861	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	39	454	187	103	465	352	175	862	172	203	906	57
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	205	548	224	122	624	605	168	1150	624	360	1471	93
Arrive On Green	0.12	0.23	0.23	0.07	0.18	0.18	0.10	0.34	0.34	0.21	0.45	0.45
Sat Flow, veh/h	1684	2368	968	1684	3420	1525	1684	3420	1525	1684	3267	206
Grp Volume(v), veh/h	39	327	314	103	465	352	175	862	172	203	474	489
Grp Sat Flow(s),veh/h/ln	1684	1710	1626	1684	1710	1525	1684	1710	1525	1684	1710	1763
Q Serve(g_s), s	2.3	20.0	20.3	6.6	14.2	0.0	11.0	24.6	3.7	11.9	23.2	23.2
Cycle Q Clear(g_c), s	2.3	20.0	20.3	6.6	14.2	0.0	11.0	24.6	3.7	11.9	23.2	23.2
Prop In Lane	1.00		0.60	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	205	396	376	122	624	605	168	1150	624	360	770	794
V/C Ratio(X)	0.19	0.83	0.83	0.84	0.75	0.58	1.04	0.75	0.28	0.56	0.62	0.62
Avail Cap(c_a), veh/h	205	637	606	122	1275	895	168	1150	624	360	770	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	43.4	40.2	40.3	50.4	42.6	26.1	49.5	32.4	8.3	38.6	23.0	23.0
Incr Delay (d2), s/veh	0.4	4.8	5.5	38.1	1.8	0.9	80.1	4.5	1.1	1.5	2.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.4	8.2	4.0	5.8	6.7	8.1	10.1	1.4	4.8	9.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	44.9	45.8	88.5	44.4	26.9	129.6	36.9	9.4	40.2	25.8	25.7
LnGrp LOS	D	D	D	F	D	C	F	D	A	D	C	C
Approach Vol, veh/h		680			920			1209			1166	
Approach Delay, s/veh		45.3			42.6			46.4			28.2	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.5	41.0	12.0	29.5	15.0	53.5	17.4	24.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	37.0	8.0	41.0	11.0	34.0	8.0	41.0				
Max Q Clear Time (g_c+I1), s	13.9	26.6	8.6	22.3	13.0	25.2	4.3	16.2				
Green Ext Time (p_c), s	0.0	4.2	0.0	3.2	0.0	3.5	0.0	3.9				
Intersection Summary												
HCM 6th Ctrl Delay			40.0									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	301	224	179	294	345	163	1172	244	215	1723	36
Future Volume (veh/h)	22	301	224	179	294	345	163	1172	244	215	1723	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	23	317	236	188	309	363	172	1234	257	226	1814	38
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	29	391	284	130	455	406	130	1289	575	364	1769	37
Arrive On Green	0.02	0.21	0.21	0.08	0.27	0.27	0.08	0.38	0.38	0.22	0.52	0.52
Sat Flow, veh/h	1684	1889	1374	1684	1710	1525	1684	3420	1525	1684	3426	72
Grp Volume(v), veh/h	23	286	267	188	309	363	172	1234	257	226	903	949
Grp Sat Flow(s),veh/h/ln	1684	1710	1553	1684	1710	1525	1684	1710	1525	1684	1710	1787
Q Serve(g_s), s	1.8	20.7	21.4	10.0	21.0	29.8	10.0	45.7	12.8	15.8	67.1	67.1
Cycle Q Clear(g_c), s	1.8	20.7	21.4	10.0	21.0	29.8	10.0	45.7	12.8	15.8	67.1	67.1
Prop In Lane	1.00		0.88	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	29	354	321	130	455	406	130	1289	575	364	883	923
V/C Ratio(X)	0.79	0.81	0.83	1.45	0.68	0.89	1.33	0.96	0.45	0.62	1.02	1.03
Avail Cap(c_a), veh/h	104	539	490	130	566	505	130	1289	575	364	883	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.27	0.27	0.27
Uniform Delay (d), s/veh	63.6	49.1	49.4	60.0	42.7	45.9	60.0	39.5	18.4	46.1	31.4	31.4
Incr Delay (d2), s/veh	35.8	5.4	7.2	240.8	2.4	15.7	191.0	16.7	2.5	0.9	21.8	23.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	9.0	8.6	12.8	8.8	12.5	11.0	20.8	4.6	6.4	29.9	31.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.4	54.5	56.6	300.8	45.1	61.6	251.0	56.2	20.9	47.0	53.2	54.8
LnGrp LOS	F	D	E	F	D	E	F	E	C	D	F	F
Approach Vol, veh/h		576			860			1663			2078	
Approach Delay, s/veh		57.3			108.0			70.9			53.2	
Approach LOS		E			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.1	53.0	14.0	30.9	14.0	71.1	6.3	38.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	14.0	49.0	10.0	41.0	10.0	53.0	8.0	43.0				
Max Q Clear Time (g_c+I1), s	17.8	47.7	12.0	23.4	12.0	69.1	3.8	31.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	2.7	0.0	0.0	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			68.5									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report
06/16/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	301	224	179	294	345	163	1223	244	215	1739	37
Future Volume (veh/h)	25	301	224	179	294	345	163	1223	244	215	1739	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	26	317	236	188	309	363	172	1287	257	226	1831	39
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	32	393	286	130	455	406	130	1289	575	362	1763	37
Arrive On Green	0.02	0.21	0.21	0.08	0.27	0.27	0.08	0.38	0.38	0.21	0.51	0.51
Sat Flow, veh/h	1684	1889	1374	1684	1710	1525	1684	3420	1525	1684	3424	73
Grp Volume(v), veh/h	26	286	267	188	309	363	172	1287	257	226	912	958
Grp Sat Flow(s),veh/h/ln	1684	1710	1553	1684	1710	1525	1684	1710	1525	1684	1710	1787
Q Serve(g_s), s	2.0	20.7	21.4	10.0	21.0	29.8	10.0	48.9	12.8	15.8	66.9	66.9
Cycle Q Clear(g_c), s	2.0	20.7	21.4	10.0	21.0	29.8	10.0	48.9	12.8	15.8	66.9	66.9
Prop In Lane	1.00		0.88	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	32	356	323	130	455	406	130	1289	575	362	881	920
V/C Ratio(X)	0.82	0.80	0.83	1.45	0.68	0.89	1.33	1.00	0.45	0.62	1.04	1.04
Avail Cap(c_a), veh/h	104	539	490	130	566	505	130	1289	575	362	881	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.24	0.24	0.24
Uniform Delay (d), s/veh	63.6	49.0	49.2	60.0	42.7	45.9	60.0	40.5	18.4	46.3	31.5	31.5
Incr Delay (d2), s/veh	38.5	5.2	6.9	240.8	2.4	15.7	191.0	24.7	2.5	0.8	25.0	26.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.0	8.5	12.8	8.8	12.5	11.0	23.5	4.6	6.4	30.6	32.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.0	54.1	56.1	300.8	45.1	61.6	251.0	65.1	20.9	47.1	56.5	58.5
LnGrp LOS	F	D	E	F	D	E	F	E	C	D	F	F
Approach Vol, veh/h	579			860			1716			2096		
Approach Delay, s/veh	57.2			108.0			77.1			56.4		
Approach LOS	E			F			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.9	53.0	14.0	31.1	14.0	70.9	6.4	38.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	41.0	49.0	10.0	41.0	10.0	53.0	8.0	43.0				
Max Q Clear Time (g_c+I1), s	11.8	50.9	12.0	23.4	12.0	68.9	4.0	31.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay 71.7
HCM 6th LOS E

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report
06/16/2023

												
Movement	\$, -	\$, .	\$, /	W, -	W, .	W, /	O, -	O, .	O, /	1, -	1, .	1, /
-ane Conversions												
Initial Volume	2(	301	227	189	297	37(	163	1223	277	21(	1839	38
Future Volume	2(	301	227	189	297	37(	163	1223	277	21(	1839	38
Initial : 5 : 6, "eh	0	0	0	0	0	0	0	0	0	0	0	0
Ped*, like AdjA<p; .6	1%00		1%00	1%00		1%00	1%00		1%00	1%00		1%00
Parking, us, Adj	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00
Work =one >n Approach		0o			0o			0o			0o	
Adj 1st Flow, "eh/h/n	186?	1200	1200	186?	1200	1200	186?	1200	1200	186?	1200	1200
Adj Flow / ate, "eh/h	26	318	236	1??	309	363	182	1278	2(8	226	1731	39
Peak @our Factor	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(	0%9(
Percent @ea"A 3eh, B	0	0	0	0	0	0	0	0	0	0	0	0
Cap, "eh/h	2((	(89	399	121	730	63?	1((	1(12	637	792	2(17	(7
Arrive >n)reen	0%1(	0%18	0%18	0%11	0%13	0%13	0%09	0%31	0%31	0%29	0%(1	0%(1
1st Flow, "eh/h	16?7	3720	1(2(	16?7	3720	1(2(	16?7	7917	1(2(	16?7	79(2	10(
)rp 304u ! e5"6, "eh/h	26	318	236	1??	309	363	182	1278	2(8	226	1211	6(9
)rp 1st Flow5s6, "eh/h/n	16?7	1810	1(2(	16?7	1810	1(2(	16?7	163?	1(2(	16?7	163?	18?1
: 1er"e5+<s6, s	1%8	11%0	18%6	17%0	11%3	0%0	12%0	31%9	(%3	17%3	38%(	38%6
CAcle : Clear5+<c6, s	1%8	11%0	18%6	17%0	11%3	0%0	12%0	31%9	(%3	17%3	38%(	38%6
Prop n -ane	1%00		1%00	1%00		1%00	1%00		1%00	1%00		0%06
-ane)rp Cap5c6, "eh/h	2((	(89	399	121	730	63?	1((	1(12	637	792	1663	907
3/C /atio5'6	0%10	0%(	0%(9	1%07	0%82	0%(8	1%11	0%?(	0%71	0%76	0%83	0%83
A"ai# Cap5c<a6, "eh/h	2((	1089	622	121	1236	998	1((	1(12	637	792	1663	907
@CM Platoon /atio	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00
Cpstre! Filter56	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	1%00	0%27	0%27	0%27
Cnizor ! #elaA 5d6, s/"eh	78%6	79%7	71%9	(?%0	(7%6	27%9	(9%0	72%2	11%3	38%6	2(%0	2(%0
ncr #elaA 5d26, s/"eh	0%2	0%?	1%7	86%?	2%3	0%?	103%6	6%2	1%9	0%2	0%8	1%3
Initial : #elaA 5d36, s/"eh	0%0	0%0	0%0	0%0	0%0	0%0	0%0	0%0	0%0	0%0	0%0	0%0
File ,ack>2: 5(0B6, "eh/n	0%8	7%6	6%(	9%6	7%?	?%2	9%7	13%1	2%8	(%6	13%7	17%8
Cnsi+% Mo"e ! ent #elaA, s/"eh												
-n)rp #elaA 5d6, s/"eh	78%8	(0%3	73%3	137%?	(6%9	29%8	162%6	72%7	13%2	38%?	2(%8	26%3
-n)rp ->1	#	#	#	F	\$	C	F	#	,	#	C	C
Approach 304, "eh/h		(89			?60			1816			2096	
Approach #elaA, s/"eh		78%3			62%7			(7%6			28%2	
Approach ->1		#			\$			#			C	
.i ! er * Assi+ned Phs	1	2	3	7	(	6	8	?				
Phs #uration 5)+D+ / c6, s	72%0	77%0	12%0	26%0	16%0	80%0	23%8	20%3				
Chan+e Period 5D+ / c6, s	7%0	7%0	7%0	7%0	7%0	7%0	7%0	7%0				
MaE)reen 1ettin+ 5) ! aE6, s	19%0	70%0	17%0	71%0	12%0	78%0	?%0	78%0				
MaE : Clear .i ! e 5+<c+ 16, s	16%3	33%9	16%0	19%6	17%0	39%6	3%8	13%3				
)reen \$Et .i ! e 5p<c6, s	0%2	7%0	0%0	2%7	0%0	(%6	0%0	3%0				
Intersection 1u ! ! arA												
@CM 6th Ctr# #elaA				77%1								
@CM 6th ->1				#								



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN MOVEMENTS	TM	19-Jun-23	PIXI5AMG-0001	1	OF 2

E/W STREET : MOJAVE DRIVE

N/S STREET : HIGHWAY 395

CONDITION : PM PEAK HOUR

INTERSECTION : 4

PROJECTED GROWTH : 3.5%

PER YEAR :

TURN MOVEMENTS

	Existing	Year 2024	Other			Background	Year 2034	Future	Future	Future	Future
Condition	Condition	Ambient	Area	Background	Project	+ Project	Ambient	Background	Background	Year 2044	Year 2044
Scenario #	2	Growth	Development	Condition	Trips	Condition	Growth	Condition	Condition	Condition	Condition
				4		6		8	10	12	14

MOJAVE DRIVE

EB LEFT	39	3	0	42	2	44	14	56	58	43	45
EB THRU	344	24	4	372	0	372	120	492	492	346	346
EB RIGHT	98	7	0	105	0	105	34	139	139	139	139
WB LEFT	78	5	34	117	0	117	27	144	144	212	212
WB THRU	362	25	10	397	0	397	127	524	524	390	390
WB RIGHT	176	12	15	203	0	203	62	265	265	322	322

HIGHWAY 395

NB LEFT	103	7	0	110	0	110	36	146	146	176	176
NB THRU	694	49	3	746	20	766	243	989	1009	1976	1996
NB RIGHT	94	7	18	119	0	119	33	152	152	263	263
SB LEFT	211	15	12	238	0	238	74	312	312	286	286
SB THRU	870	61	7	938	48	986	305	1243	1291	1620	1668
SB RIGHT	62	4	0	66	3	69	22	88	91	53	56
TOTALS	3131	219	103	3453	73	3526	1097	4550	4623	5826	5899

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100



DAVID EVANS
AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TM	19-Jun-23	PIXI5AMG-0001	2	OF 2

E/W STREET : MOJAVE DRIVE
CONDITION : PM PEAK HOUR

N/S STREET : HIGHWAY 395
PHF : 0.95

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
9	199	56	1	0	0	0	4	1	0	7	0
13	182	49	1	0	0	0	4	0	0	7	0
15	208	52	0	2	1	1	0	0	0	4	0
20	172	50	0	4	0	0	0	0	0	10	0

Number of Axles	2-Axle Trucks	3-Axle Trucks	4+ Axle Trucks
PCE factor	1.5	2	3

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
19	141	26	0	0	1	1	2	2	0	6	0
24	124	23	1	0	0	0	2	1	0	13	0
25	152	26	1	4	0	0	0	0	0	7	0
19	156	20	0	1	0	1	0	0	0	9	0

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced Totals
--	------------------	-----------------	-------------------	---------------	--------------------

MOJAVE DRIVE

EB LEFT	5	29	34	39	39
EB THRU	2	341	343	344	344
EB RIGHT	2	94	96	98	98
WB LEFT	3	72	75	78	78
WB THRU	5	352	357	362	362
WB RIGHT	3	169	172	176	176

HIGHWAY 395

NB LEFT	4	95	99	103	103
NB THRU	44	573	617	694	694
NB RIGHT	4	87	91	94	94
SB LEFT	2	207	209	211	211
SB THRU	42	761	803	870	870
SB RIGHT	3	57	60	62	62

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
41	86	23	0	1	0	0	1	0	0	0	0
43	84	16	1	1	0	1	1	0	0	0	0
45	93	18	0	0	1	1	0	1	0	0	0
40	89	15	0	1	0	0	0	1	0	0	0

WEST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
23	80	5	1	0	0	0	0	1	0	0	0
24	84	5	0	2	1	1	0	2	0	0	0
27	88	10	0	0	0	0	0	0	0	0	0
20	89	9	0	0	0	0	0	1	0	0	0

Los Angeles Office: 213.337.3680 ~ Ontario Office: 909.481.5750 ~ San Diego Office: 619.400.0600

Santa Clarita Office: 661.284.7400 ~ Temecula Office: 951.294.9300 ~ Tustin Office: 714.665.4500

Victorville Office: 760.524.9100

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/15/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	39	344	98	78	362	176	103	694	94	211	870	62
Future Volume (veh/h)	39	344	98	78	362	176	103	694	94	211	870	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	41	362	103	82	381	185	108	731	99	222	916	65
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	52	436	123	100	436	209	126	1874	836	233	1980	141
Arrive On Green	0.03	0.17	0.17	0.06	0.19	0.19	0.07	0.55	0.55	0.14	0.61	0.61
Sat Flow, veh/h	1684	2636	740	1684	2243	1074	1684	3420	1525	1684	3239	230
Grp Volume(v), veh/h	41	233	232	82	289	277	108	731	99	222	484	497
Grp Sat Flow(s),veh/h/ln	1684	1710	1667	1684	1710	1607	1684	1710	1525	1684	1710	1759
Q Serve(g_s), s	4.4	23.8	24.4	8.7	29.6	30.3	11.5	22.2	4.4	23.6	27.7	27.7
Cycle Q Clear(g_c), s	4.4	23.8	24.4	8.7	29.6	30.3	11.5	22.2	4.4	23.6	27.7	27.7
Prop In Lane	1.00		0.44	1.00		0.67	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	52	283	276	100	333	312	126	1874	836	233	1046	1075
V/C Ratio(X)	0.79	0.82	0.84	0.82	0.87	0.89	0.86	0.39	0.12	0.95	0.46	0.46
Avail Cap(c_a), veh/h	75	388	378	177	492	462	186	1874	836	233	1046	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.0	72.8	73.1	84.0	70.6	70.8	82.6	23.5	11.7	77.3	19.0	19.0
Incr Delay (d2), s/veh	29.5	9.9	11.6	14.6	10.8	13.2	21.9	0.6	0.3	45.8	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	11.0	11.1	4.1	13.7	13.3	5.7	8.8	2.0	13.0	10.9	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.4	82.7	84.7	98.6	81.3	84.1	104.6	24.1	12.0	123.1	20.5	20.4
LnGrp LOS	F	F	F	F	F	F	F	C	B	F	C	C
Approach Vol, veh/h	506			648			938			1203		
Approach Delay, s/veh	86.4			84.7			32.1			39.4		
Approach LOS	F			F			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	103.0	14.8	33.9	17.5	114.5	9.6	39.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	25.0	99.0	19.0	41.0	20.0	104.0	8.0	52.0				
Max Q Clear Time (g_c+I1), s	25.6	24.2	10.7	26.4	13.5	29.7	6.4	32.3				
Green Ext Time (p_c), s	0.0	5.2	0.1	2.0	0.1	6.3	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	53.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	372	105	117	397	203	110	746	119	238	938	66
Future Volume (veh/h)	42	372	105	117	397	203	110	746	119	238	938	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	44	392	111	123	418	214	116	785	125	251	987	69
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	444	124	140	469	238	133	1810	807	225	1893	132
Arrive On Green	0.04	0.17	0.17	0.08	0.21	0.21	0.08	0.53	0.53	0.13	0.58	0.58
Sat Flow, veh/h	1684	2638	739	1684	2197	1113	1684	3420	1525	1684	3243	227
Grp Volume(v), veh/h	44	253	250	123	324	308	116	785	125	251	520	536
Grp Sat Flow(s),veh/h/ln	1684	1710	1667	1684	1710	1600	1684	1710	1525	1684	1710	1759
Q Serve(g_s), s	4.8	27.0	27.5	13.5	34.4	35.0	12.7	26.2	5.8	25.0	34.1	34.1
Cycle Q Clear(g_c), s	4.8	27.0	27.5	13.5	34.4	35.0	12.7	26.2	5.8	25.0	34.1	34.1
Prop In Lane	1.00		0.44	1.00		0.70	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	64	288	281	140	365	342	133	1810	807	225	998	1027
V/C Ratio(X)	0.69	0.88	0.89	0.88	0.89	0.90	0.87	0.43	0.15	1.12	0.52	0.52
Avail Cap(c_a), veh/h	72	375	365	171	475	445	180	1810	807	225	998	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	88.9	75.9	76.1	84.8	71.4	71.6	85.2	26.9	12.1	81.0	23.3	23.3
Incr Delay (d2), s/veh	21.0	16.8	19.4	32.2	15.1	17.6	27.3	0.8	0.4	94.5	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	13.0	13.1	7.0	16.3	15.7	6.5	10.6	2.8	16.5	13.7	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.9	92.7	95.5	117.0	86.5	89.3	112.5	27.7	12.5	175.5	25.3	25.2
LnGrp LOS	F	F	F	F	F	F	F	C	B	F	C	C
Approach Vol, veh/h	547			755			1026			1307		
Approach Delay, s/veh	95.4			92.6			35.4			54.1		
Approach LOS	F			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	103.0	19.6	35.5	18.8	113.2	11.1	44.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	25.0	99.0	19.0	41.0	20.0	104.0	8.0	52.0				
Max Q Clear Time (g_c+I1), s	27.0	28.2	15.5	29.5	14.7	36.1	6.8	37.0				
Green Ext Time (p_c), s	0.0	5.8	0.1	2.0	0.1	7.0	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay	63.0											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report
06/16/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	372	105	117	397	203	110	766	119	238	986	69
Future Volume (veh/h)	44	372	105	117	397	203	110	766	119	238	986	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	46	392	111	123	418	214	116	806	125	251	1038	73
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	444	124	140	469	238	133	1810	807	225	1892	133
Arrive On Green	0.04	0.17	0.17	0.08	0.21	0.21	0.08	0.53	0.53	0.13	0.58	0.58
Sat Flow, veh/h	1684	2638	739	1684	2197	1113	1684	3420	1525	1684	3241	228
Grp Volume(v), veh/h	46	253	250	123	324	308	116	806	125	251	548	563
Grp Sat Flow(s),veh/h/ln	1684	1710	1667	1684	1710	1600	1684	1710	1525	1684	1710	1759
Q Serve(g_s), s	5.1	27.0	27.5	13.5	34.4	35.0	12.7	27.2	5.8	25.0	36.7	36.7
Cycle Q Clear(g_c), s	5.1	27.0	27.5	13.5	34.4	35.0	12.7	27.2	5.8	25.0	36.7	36.7
Prop In Lane	1.00		0.44	1.00		0.70	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	64	288	281	140	365	342	133	1810	807	225	998	1027
V/C Ratio(X)	0.72	0.88	0.89	0.88	0.89	0.90	0.87	0.45	0.15	1.12	0.55	0.55
Avail Cap(c_a), veh/h	72	375	365	171	475	445	180	1810	807	225	998	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	89.0	75.9	76.1	84.8	71.4	71.6	85.2	27.1	12.1	81.0	23.8	23.9
Incr Delay (d2), s/veh	25.9	16.8	19.4	32.2	15.1	17.6	27.3	0.8	0.4	94.5	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	13.0	13.1	7.0	16.3	15.7	6.5	11.0	2.8	16.5	14.8	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.9	92.7	95.5	117.0	86.5	89.3	112.5	27.9	12.5	175.5	26.0	26.0
LnGrp LOS	F	F	F	F	F	F	F	C	B	F	C	C
Approach Vol, veh/h	549			755			1047			1362		
Approach Delay, s/veh	95.8			92.6			35.4			53.5		
Approach LOS	F			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	103.0	19.6	35.5	18.8	113.2	11.1	44.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	25.0	99.0	19.0	41.0	20.0	104.0	8.0	52.0				
Max Q Clear Time (g_c+T), s	29.2	29.2	15.5	29.5	14.7	38.7	7.1	37.0				
Green Ext Time (p_c), s	0.0	6.0	0.1	2.0	0.1	7.6	0.0	2.9				

Intersection Summary

HCM 6th Ctrl Delay 62.6
HCM 6th LOS E

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	372	105	117	397	203	110	766	119	238	986	69
Future Volume (veh/h)	44	372	105	117	397	203	110	766	119	238	986	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	46	392	111	123	418	214	116	806	125	251	1038	73
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	493	138	153	564	554	142	1270	705	334	1573	111
Arrive On Green	0.11	0.19	0.19	0.09	0.16	0.16	0.08	0.37	0.37	0.20	0.49	0.49
Sat Flow, veh/h	1684	2638	739	1684	3420	1525	1684	3420	1525	1684	3241	228
Grp Volume(v), veh/h	46	253	250	123	418	214	116	806	125	251	548	563
Grp Sat Flow(s),veh/h/ln	1684	1710	1667	1684	1710	1525	1684	1710	1525	1684	1710	1759
Q Serve(g_s), s	2.6	14.8	15.1	7.5	12.2	0.0	7.1	20.4	2.1	14.8	25.5	25.5
Cycle Q Clear(g_c), s	2.6	14.8	15.1	7.5	12.2	0.0	7.1	20.4	2.1	14.8	25.5	25.5
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	190	320	312	153	564	554	142	1270	705	334	830	854
V/C Ratio(X)	0.24	0.79	0.80	0.80	0.74	0.39	0.82	0.63	0.18	0.75	0.66	0.66
Avail Cap(c_a), veh/h	190	667	651	176	1400	927	176	1270	705	369	830	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	40.7	40.9	46.8	41.7	24.8	47.3	27.2	6.1	39.7	20.5	20.5
Incr Delay (d2), s/veh	0.6	4.4	4.8	20.4	1.9	0.4	21.0	2.4	0.5	7.6	4.1	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.2	6.2	3.9	5.0	3.7	3.7	8.0	0.7	6.4	9.8	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	45.1	45.7	67.2	43.7	25.2	68.3	29.6	6.6	47.3	24.6	24.4
LnGrp LOS	D	D	D	E	D	C	E	C	A	D	C	C
Approach Vol, veh/h		549			755			1047			1362	
Approach Delay, s/veh		45.2			42.3			31.2			28.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.8	43.0	13.6	23.6	12.8	55.0	15.9	21.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	23.0	39.0	11.0	41.0	11.0	51.0	9.0	43.0				
Max Q Clear Time (g_c+I1), s	16.8	22.4	9.5	17.1	9.1	27.5	4.6	14.2				
Green Ext Time (p_c), s	0.4	4.8	0.0	2.5	0.0	6.6	0.0	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	492	139	144	524	265	146	989	152	312	1243	88
Future Volume (veh/h)	56	492	139	144	524	265	146	989	152	312	1243	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	59	518	146	152	552	279	154	1041	160	328	1308	93
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	567	159	169	599	302	171	1323	590	358	1613	114
Arrive On Green	0.04	0.22	0.22	0.10	0.27	0.27	0.10	0.39	0.39	0.21	0.50	0.50
Sat Flow, veh/h	1684	2637	740	1684	2200	1110	1684	3420	1525	1684	3239	230
Grp Volume(v), veh/h	59	335	329	152	429	402	154	1041	160	328	689	712
Grp Sat Flow(s),veh/h/ln	1684	1710	1667	1684	1710	1600	1684	1710	1525	1684	1710	1759
Q Serve(g_s), s	6.6	36.1	36.4	16.8	46.0	46.1	17.1	50.6	10.4	35.9	64.0	64.4
Cycle Q Clear(g_c), s	6.6	36.1	36.4	16.8	46.0	46.1	17.1	50.6	10.4	35.9	64.0	64.4
Prop In Lane	1.00		0.44	1.00		0.69	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	73	368	359	169	466	436	171	1323	590	358	852	876
V/C Ratio(X)	0.81	0.91	0.92	0.90	0.92	0.92	0.90	0.79	0.27	0.91	0.81	0.81
Avail Cap(c_a), veh/h	80	408	397	196	525	492	205	1323	590	393	852	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	89.5	72.3	72.4	84.0	66.7	66.8	83.8	51.0	23.3	72.6	39.8	39.9
Incr Delay (d2), s/veh	41.3	22.9	24.5	34.8	20.4	21.8	33.1	4.8	1.1	24.5	8.2	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	17.8	17.7	8.8	22.2	21.0	8.9	21.9	3.9	17.6	27.7	28.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.8	95.2	96.9	118.7	87.1	88.5	117.0	55.8	24.5	97.1	48.0	48.1
LnGrp LOS	F	F	F	F	F	F	F	E	C	F	D	D
Approach Vol, veh/h		723			983			1355			1729	
Approach Delay, s/veh		98.9			92.6			59.1			57.3	
Approach LOS		F			F			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.2	77.0	22.9	44.6	23.2	98.0	12.2	55.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	44.0	73.0	22.0	45.0	23.0	94.0	9.0	58.0				
Max Q Clear Time (g_c+I1), s	37.9	52.6	18.8	38.4	19.1	66.4	8.6	48.1				
Green Ext Time (p_c), s	0.5	7.0	0.1	1.9	0.1	9.7	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay				71.3								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	492	139	144	524	265	146	1009	152	312	1291	91
Future Volume (veh/h)	58	492	139	144	524	265	146	1009	152	312	1291	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	61	518	146	152	552	279	154	1062	160	328	1359	96
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	571	160	169	599	302	171	1320	589	358	1611	113
Arrive On Green	0.04	0.22	0.22	0.10	0.27	0.27	0.10	0.39	0.39	0.21	0.50	0.50
Sat Flow, veh/h	1684	2637	740	1684	2200	1110	1684	3420	1525	1684	3241	228
Grp Volume(v), veh/h	61	335	329	152	429	402	154	1062	160	328	715	740
Grp Sat Flow(s),veh/h/ln	1684	1710	1667	1684	1710	1600	1684	1710	1525	1684	1710	1759
Q Serve(g_s), s	6.8	36.1	36.4	16.9	46.1	46.2	17.1	52.3	10.4	36.0	68.4	69.1
Cycle Q Clear(g_c), s	6.8	36.1	36.4	16.9	46.1	46.2	17.1	52.3	10.4	36.0	68.4	69.1
Prop In Lane	1.00		0.44	1.00		0.69	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	75	370	361	169	465	435	171	1320	589	358	850	874
V/C Ratio(X)	0.81	0.91	0.91	0.90	0.92	0.92	0.90	0.80	0.27	0.92	0.84	0.85
Avail Cap(c_a), veh/h	80	407	397	196	524	491	205	1320	589	392	850	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	89.6	72.2	72.3	84.1	66.9	66.9	84.0	51.7	23.5	72.8	41.1	41.3
Incr Delay (d2), s/veh	43.0	22.1	23.7	34.9	20.5	21.9	33.3	5.3	1.1	24.7	9.9	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	17.7	17.6	8.9	22.2	21.0	8.9	22.7	3.9	17.7	29.9	31.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.5	94.4	96.1	119.0	87.4	88.8	117.3	57.0	24.6	97.5	51.0	51.2
LnGrp LOS	F	F	F	F	F	F	F	E	C	F	D	D
Approach Vol, veh/h	725				983		1376				1783	
Approach Delay, s/veh	98.4				92.9		60.0				59.6	
Approach LOS	F				F		E				E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.2	77.0	23.0	44.9	23.2	98.0	12.4	55.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	44.0	73.0	22.0	45.0	23.0	94.0	9.0	58.0				
Max Q Clear Time (g_c+3.0), s	39.0	54.3	18.9	38.4	19.1	71.1	8.8	48.2				
Green Ext Time (p_c), s	0.5	6.9	0.1	1.9	0.1	9.6	0.0	3.2				

Intersection Summary

HCM 6th Ctrl Delay 72.2
HCM 6th LOS E

4: US Highway 395 & Mojave Drive

Synchro 11 Report

												
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HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	346	139	212	390	322	176	1976	263	286	1620	53
Future Volume (veh/h)	43	346	139	212	390	322	176	1976	263	286	1620	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	45	364	146	223	411	339	185	2080	277	301	1705	56
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	57	441	174	164	443	362	173	1738	775	216	1804	59
Arrive On Green	0.03	0.18	0.18	0.10	0.25	0.25	0.10	0.51	0.51	0.13	0.53	0.53
Sat Flow, veh/h	1684	2394	946	1684	1785	1462	1684	3420	1525	1684	3380	111
Grp Volume(v), veh/h	45	258	252	223	394	356	185	2080	277	301	860	901
Grp Sat Flow(s),veh/h/ln	1684	1710	1630	1684	1710	1537	1684	1710	1525	1684	1710	1780
Q Serve(g_s), s	5.2	28.3	29.0	19.0	43.8	44.3	20.0	99.0	15.3	25.0	91.8	93.2
Cycle Q Clear(g_c), s	5.2	28.3	29.0	19.0	43.8	44.3	20.0	99.0	15.3	25.0	91.8	93.2
Prop In Lane	1.00		0.58	1.00		0.95	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	57	315	300	164	424	381	173	1738	775	216	913	950
V/C Ratio(X)	0.80	0.82	0.84	1.36	0.93	0.94	1.07	1.20	0.36	1.39	0.94	0.95
Avail Cap(c_a), veh/h	69	360	343	164	456	410	173	1738	775	216	913	950
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	93.5	76.4	76.7	87.9	71.6	71.7	87.4	47.9	14.9	84.9	42.6	42.9
Incr Delay (d2), s/veh	39.3	12.6	15.1	195.5	24.5	27.8	88.4	94.6	1.3	202.8	18.7	19.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	13.3	13.2	17.1	21.6	20.0	12.8	62.8	5.4	22.9	41.4	43.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.8	89.1	91.8	283.4	96.1	99.5	175.9	142.5	16.2	287.7	61.3	62.1
LnGrp LOS	F	F	F	F	F	F	F	F	B	F	E	E
Approach Vol, veh/h	555			973			2542			2062		
Approach Delay, s/veh	93.8			140.3			131.2			94.7		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	103.0	23.0	39.9	24.0	108.0	10.5	52.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	25.0	99.0	19.0	41.0	20.0	104.0	8.0	52.0				
Max Q Clear Time (g_c+I1), s	27.0	101.0	21.0	31.0	22.0	95.2	7.2	46.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	6.4	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay	117.0											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report
06/16/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	346	139	212	390	322	176	1996	263	286	1668	56
Future Volume (veh/h)	45	346	139	212	390	322	176	1996	263	286	1668	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	47	364	146	223	411	339	185	2101	277	301	1756	59
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	59	444	175	164	442	362	173	1734	774	216	1799	60
Arrive On Green	0.04	0.19	0.19	0.10	0.25	0.25	0.10	0.51	0.51	0.13	0.53	0.53
Sat Flow, veh/h	1684	2394	946	1684	1785	1462	1684	3420	1525	1684	3377	113
Grp Volume(v), veh/h	47	258	252	223	394	356	185	2101	277	301	886	929
Grp Sat Flow(s),veh/h/ln	1684	1710	1630	1684	1710	1537	1684	1710	1525	1684	1710	1780
Q Serve(g_s), s	5.4	28.3	29.0	19.0	43.9	44.3	20.0	99.0	15.4	25.0	98.0	99.7
Cycle Q Clear(g_c), s	5.4	28.3	29.0	19.0	43.9	44.3	20.0	99.0	15.4	25.0	98.0	99.7
Prop In Lane	1.00		0.58	1.00		0.95	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	59	317	302	164	424	381	173	1734	774	216	911	948
V/C Ratio(X)	0.80	0.81	0.83	1.36	0.93	0.94	1.07	1.21	0.36	1.40	0.97	0.98
Avail Cap(c_a), veh/h	69	359	342	164	456	409	173	1734	774	216	911	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	93.5	76.3	76.6	88.1	71.7	71.9	87.6	48.1	15.0	85.1	44.2	44.6
Incr Delay (d2), s/veh	41.4	12.2	14.5	196.5	24.6	27.9	89.1	100.7	1.3	203.9	23.8	24.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	13.3	13.2	17.1	21.7	20.0	12.9	64.3	5.4	22.9	45.2	48.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.9	88.5	91.1	284.6	96.3	99.8	176.7	148.8	16.3	289.0	68.0	69.5
LnGrp LOS	F	F	F	F	F	F	F	F	B	F	E	E
Approach Vol, veh/h	557			973			2563			2116		
Approach Delay, s/veh	93.6			140.8			136.5			100.1		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	103.0	23.0	40.2	24.0	108.0	10.8	52.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	25.0	99.0	19.0	41.0	20.0	104.0	8.0	52.0				
Max Q Clear Time (g_c+Y), s	101.0	101.0	21.0	31.0	22.0	101.7	7.4	46.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	1.9	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay	120.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

4: US Highway 395 & Mojave Drive

Synchro 11 Report

06/16/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	346	139	212	390	322	176	1996	263	286	1668	56
Future Volume (veh/h)	45	346	139	212	390	322	176	1996	263	286	1668	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1768	1800	1800	1768	1800	1800	1768	1800	1800	1768	1800	1800
Adj Flow Rate, veh/h	47	364	146	223	411	339	185	2101	277	301	1756	59
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
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	187	448	385	221	517	497	205	2273	906	295	2519	85
Arrive On Green	0.11	0.13	0.13	0.13	0.15	0.15	0.12	0.46	0.46	0.18	0.52	0.52
Sat Flow, veh/h	1684	3420	1525	1684	3420	1525	1684	4914	1525	1684	4883	164
Grp Volume(v), veh/h	47	364	146	223	411	339	185	2101	277	301	1178	637
Grp Sat Flow(s),veh/h/ln	1684	1710	1525	1684	1710	1525	1684	1638	1525	1684	1638	1770
Q Serve(g_s), s	4.1	16.6	12.7	21.0	18.5	2.8	17.3	64.2	5.5	28.0	43.5	43.5
Cycle Q Clear(g_c), s	4.1	16.6	12.7	21.0	18.5	2.8	17.3	64.2	5.5	28.0	43.5	43.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	187	448	385	221	517	497	205	2273	906	295	1690	914
V/C Ratio(X)	0.25	0.81	0.38	1.01	0.80	0.68	0.90	0.92	0.31	1.02	0.70	0.70
Avail Cap(c_a), veh/h	187	877	576	221	1133	772	232	2273	906	295	1690	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	67.6	49.4	69.5	65.5	46.7	69.3	40.4	6.3	66.0	29.3	29.3
Incr Delay (d2), s/veh	0.7	3.6	0.6	62.8	2.8	1.7	32.3	7.9	0.9	58.0	2.4	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.3	4.8	12.7	8.1	11.5	9.1	26.0	1.9	16.4	16.7	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	71.2	50.0	132.3	68.4	48.4	101.6	48.2	7.2	124.0	31.7	33.7
LnGrp LOS	E	E	D	F	E	D	F	D	A	F	C	C
Approach Vol, veh/h	557			973			2563			2116		
Approach Delay, s/veh	65.2			76.0			47.6			45.4		
Approach LOS	E			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	78.0	25.0	25.0	23.5	86.5	21.8	28.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	28.0	74.0	21.0	41.0	22.0	80.0	9.0	53.0				
Max Q Clear Time (g_c+I1), s	30.0	66.2	23.0	18.6	19.3	45.5	6.1	20.5				
Green Ext Time (p_c), s	0.0	6.6	0.0	2.4	0.1	15.0	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay	52.9											
HCM 6th LOS	D											

**CALCULATION OF FUTURE DIRECTIONAL TURN VOLUMES FROM
FUTURE DIRECTIONAL LINK VOLUMES (NCHRP 255)**

Intersection No.: 4
North/South Street: HIGHWAY 395
East/West Street: MOJAVE DRIVE

Analysis Condition: YEAR 2044 FUTURE TRAFFIC

A.M. Peak Hour

Approach Direction			Forecast Future Year			
			Link Volume		Turn Volume	Balanced Volume
South leg NB	Left	117	Approach	1,567	Left	163
	Through	536	Departure	2,093	Through	1,166
	Right	94			Right	215
North leg SB	Left	128	Approach	1,931	Left	204
	Through	593	Departure	1,492	Through	1,721
	Right	37			Right	36
West leg EB	Left	24	Approach	533	Left	22
	Through	297	Departure	463	Through	292
	Right	125			Right	224
East leg WB	Left	58	Approach	722	Left	148
	Through	309	Departure	711	Through	264
	Right	228			Right	304

Balanced

Approach Direction			Forecast Future Year			
			Link Volume		Turn Volume	Balanced Volume
South leg NB	Left	103	Approach	2,357	Left	176
	Through	694	Departure	1,930	Through	1,945
	Right	94			Right	216
North leg SB	Left	211	Approach	1,901	Left	242
	Through	870	Departure	2,290	Through	1,613
	Right	62			Right	53
West leg EB	Left	39	Approach	481	Left	42
	Through	344	Departure	608	Through	301
	Right	98			Right	139
East leg WB	Left	78	Approach	865	Left	178
	Through	362	Departure	758	Through	379

Appendix E: Other Area Projects: Tentative Tract 20422 and Mojave 68 Project

FOCUSED TRAFFIC ANALYSIS FOR
GENERAL PLAN LEVEL OF SERVICE
CONFORMANCE AND VEHICLE MILES
TRAVELED (VMT) ANALYSIS

**PROPOSED
MOJAVE DRIVE WAREHOUSE**

VICTORVILLE, CALIFORNIA

Prepared by:



**FINAL REPORT
April 3, 2023**

1 EXECUTIVE SUMMARY

This executive summary presents the findings and recommendations of this study.

1.1 Project Description

The project site is located on the northeast corner of the intersection of Mojave Drive and Mesa Linda Avenue in the City of Victorville, California. The proposed project consists of an 1,097,300 square foot (SF) warehouse building with internal office space. The warehouse building will include an 877,800 SF of high-cube transload warehouse and 219,500 SF of high-cube cold storage warehouse with loading docks lining the east side and west side of the building. The proposed project is bounded to the north, east, and west by vacant/undeveloped properties, to the south by Mojave Drive and single-family residential development.

Access to the site is proposed from a main driveway on Mojave Drive, and additional driveways on Onyx Road, Mesa Linda Avenue, and Cactus Road.

1.2 City of Victorville Level of Service Standards

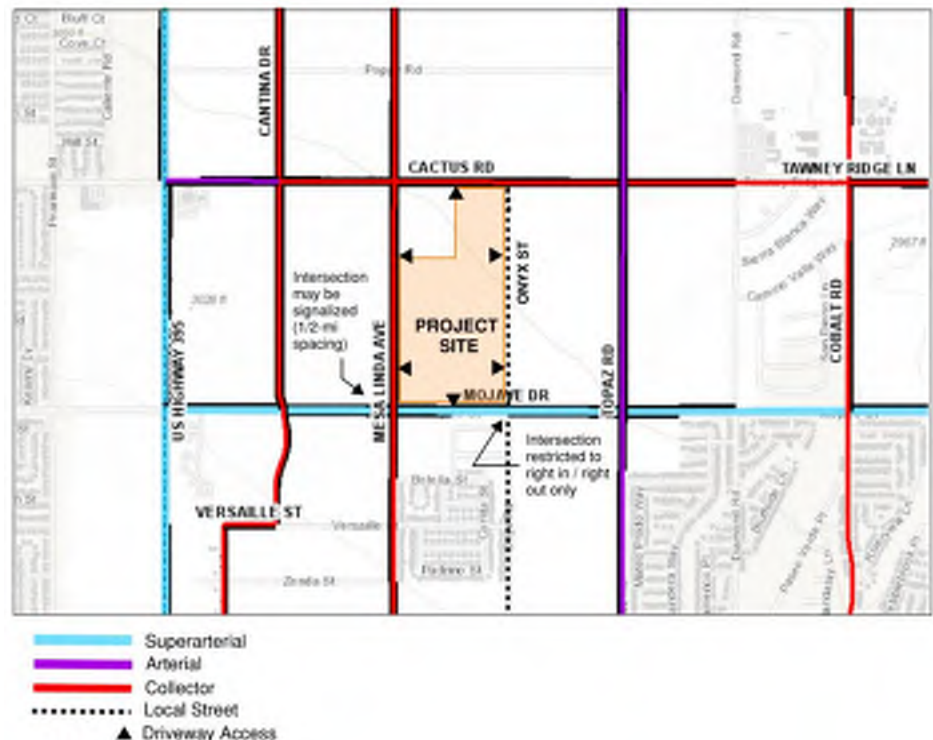
The city's peak hour level of service standard is LOS D. An intersection found to operate with a volume to capacity (V/C) ratio greater than 0.99 or with a control delay greater than 35 seconds per vehicle (i.e., LOS E or F) is considered deficient.

If a development project would worsen the peak hour level of service from a LOS D or better to a LOS E or LOS F, it is considered an impact that requires improvement to return the level of service to pre-project conditions. If a development project increases the peak hour control delay at an already deficient intersection by two percent or more, it is considered a significant impact that requires improvement to return the level of service to pre-project conditions.

1.3 General Plan Circulation System

Mojave Drive is classified as a super-arterial street in the city's general plan circulation element. This classification affects the spacing and allowable traffic control at intersections.

The proposed project relies on driveway access from city streets that surround the project site and the connections these streets make to the city's overall circulation system. The project's access may be affected by the movement restrictions inherent to streets with lower order classifications. For example, Onyx Street is restricted to right turn in / right turn out at Mojave Drive because it is a local street. The project's driveways connecting to Onyx Street do not share the same level of access to Mojave Drive as the driveways connected to Mesa Linda Avenue (with its collector classification) and, therefore, traffic using the Onyx Street driveways will have more circuitous routes.



5 BACKGROUND PLUS PROJECT CONDITIONS

The background plus project conditions scenario adds the project's estimated traffic generation at buildout (2024) to the background conditions scenario evaluated in the previous chapter. Level of service deficiencies identified in this scenario are considered "cumulative" impacts—impacts that the project contributes to, but does not solely cause, and may be responsible for a fair-share of the cost to implement any mitigation measures.

5.1 Project Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation manual, 11th Edition is the source of the trip generation rates for **High-Cube Transload Warehouse (Land Use Category 154)** and **High-Cube Cold Storage Warehouse (Land Use Category 157)** trips per 1,000 square feet of gross floor area for the Peak Hour of the Adjacent Street Traffic (between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM). The split between warehouse and cold storage warehouse was identified by the developer as 80% warehouse and 20% cold storage warehouse.

Table 5-1, on the following page, summarizes the estimated trip generation of the proposed project for an average weekday, and weekday peak hours within the AM (7-9 AM) and PM (4-6 PM) peak periods.

The source of the mode share split between passenger cars and trucks by axle is the Fontana Truck Trip Generation Study⁴. The Passenger Car Equivalent (PCE) factors are industry standard conversion standards used throughout San Bernadino County. Passenger Car Equivalents (PCE) are provided by vehicle type and the conversion of trucks to PCEs is required by the City of Victorville for the calculation of intersection level of service.

As presented in **Table 5-1** the proposed project is estimated to generate 1,696 (2,223 PCE) daily trips, 95 (126 PCE) AM peak hour trips, and 115 (153 PCE) PM peak hour trips during the respective adjacent street peak hours.

5.2 Project Trip Distribution and Assignment

The distribution of the automobile trips (employees/visitors) is illustrated in **Figure 6**. The distribution of truck trips is illustrated in **Figure 7**. Truck trips are distributed to truck routes designated in Victorville's General Plan, the nearest of which includes Mojave Drive from I-15 to Highway 395. Highway 395, as a state highway, is also a designated truck route by the State of California. The assignment of the project's automobile trips to proposed study intersections is illustrated in **Figure 8**. The assignment of the project's truck trips to proposed study intersections (in passenger car equivalents) is illustrated in **Figure 9**. The assignment of total project trips (automobile plus trucks in passenger car equivalents) to proposed study intersections is illustrated in **Figure 10**.

⁴ Fontana Truck Trip Generation Study. City of Fontana, County of San Bernardino, and the State of California. August 2003. This study collected empirical data and evaluated vehicle trip generation characteristics of several land use categories that typically generate significant volumes of truck traffic. The study collected data at numerous industrial facilities including mix of vehicles by axle. The data from this study has been integrated into ITE's Trip Generation manual.

Table 5-1: Project Trip Generation

Use		Gross Floor Area (KSF)	Daily	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
				In	Out	Total	In	Out	Total
1	High Cube Transload Warehouse (Comprises 80% of Building) (ITE Land Use Category 154)	877.8	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
			1.40	0.06	0.02	0.08	0.03	0.07	0.10
			Total Vehicle Trip Generation						
			1,229	55	16	71	25	63	88
		Mode Share	Total Project Trip Generation by Vehicle Type						
	Passenger Cars (Percent of Total)	79.57%	978	43	13	56	20	50	70
	2-Axle Trucks (Percent of Total)	3.46%	43	2	1	3	1	2	3
	3-Axle Trucks (Percent of Total)	4.64%	58	3	1	4	1	3	4
	4-Axle Trucks (Percent of Total)	12.33%	152	7	2	9	4	8	12
		PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
	Passenger Cars)	1.0	978	43	13	56	20	50	70
	2-Axle Trucks	1.5	65	3	2	5	2	3	5
	3-Axle Trucks (Percent of Total)	2.0	116	6	2	8	2	6	8
	4-Axle Trucks (Percent of Total)	3.0	456	21	6	27	12	24	36
		PCE Total	1,615	73	23	96	36	83	119
2	High Cube Cold Storage Warehouse (Comprises 20% of Building) (ITE Land Use Category 157)	219.5	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
			2.12	0.08	0.03	0.11	0.03	0.09	0.12
			Total Vehicle Trip Generation						
			466	19	6	25	8	19	27
		Mode Share	Total Project Trip Generation by Vehicle Type						
	Passenger Cars (Percent of Total)	79.57%	371	15	5	20	6	15	21
	2-Axle Trucks (Percent of Total)	3.46%	17	1	1	2	1	1	2
	3-Axle Trucks (Percent of Total)	4.64%	22	1	1	2	1	1	2
	4-Axle Trucks (Percent of Total)	12.33%	58	3	1	4	1	3	4
		PCE Factor	Total Project Trip Generation in Passenger Car Equivalents (PCE)						
	Passenger Cars)	1.0	371	15	5	20	6	15	21
	2-Axle Trucks	1.5	26	2	2	4	2	2	4
	3-Axle Trucks (Percent of Total)	2.0	44	2	2	4	2	2	4
	4-Axle Trucks (Percent of Total)	3.0	174	9	3	12	3	9	12
		PCE Total	615	28	12	40	13	28	41
Combined Total Project Trips									
	Mode Share	Combined Total Project Trip Generation by Vehicle Type							
Passenger Cars (Percent of Total)	79.57%	1,349	58	17	75	25	66	91	
2-Axle Trucks (Percent of Total)	3.46%	59	3	1	4	1	3	4	
3-Axle Trucks (Percent of Total)	4.64%	79	3	1	4	1	4	5	
4-Axle Trucks (Percent of Total)	12.33%	209	9	3	12	4	11	15	
Total Combined Project Vehicle Trips (Non-PCE)		1,696	73	22	95	31	84	115	
Combined Total Project Trip Generation in PCEs									
Passenger Cars)	1.0	1,349	58	17	75	25	66	91	
2-Axle Trucks	1.5	89	5	2	7	2	5	7	
3-Axle Trucks (Percent of Total)	2.0	158	6	2	8	2	8	10	
4-Axle Trucks (Percent of Total)	3.0	627	27	9	36	12	33	45	
Total Combined Project Vehicle Trips (PCE)		2,223	96	30	126	41	112	153	

Notes:

KSF = Thousands of Square Feet.

AM / PM Peak Hour of Adjacent Street Traffic = Trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods.

Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition). Average rates for land use category 154 (High-Cube Transload and Short-Term Storage Warehouse) and land use category 157 (High-Cube Cold Storage Warehouse) Source of passenger car / truck mode share (percentage of total): Fontana Truck Trip Generation Study for Heavy Warehouse Uses (August 2003).

Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions.

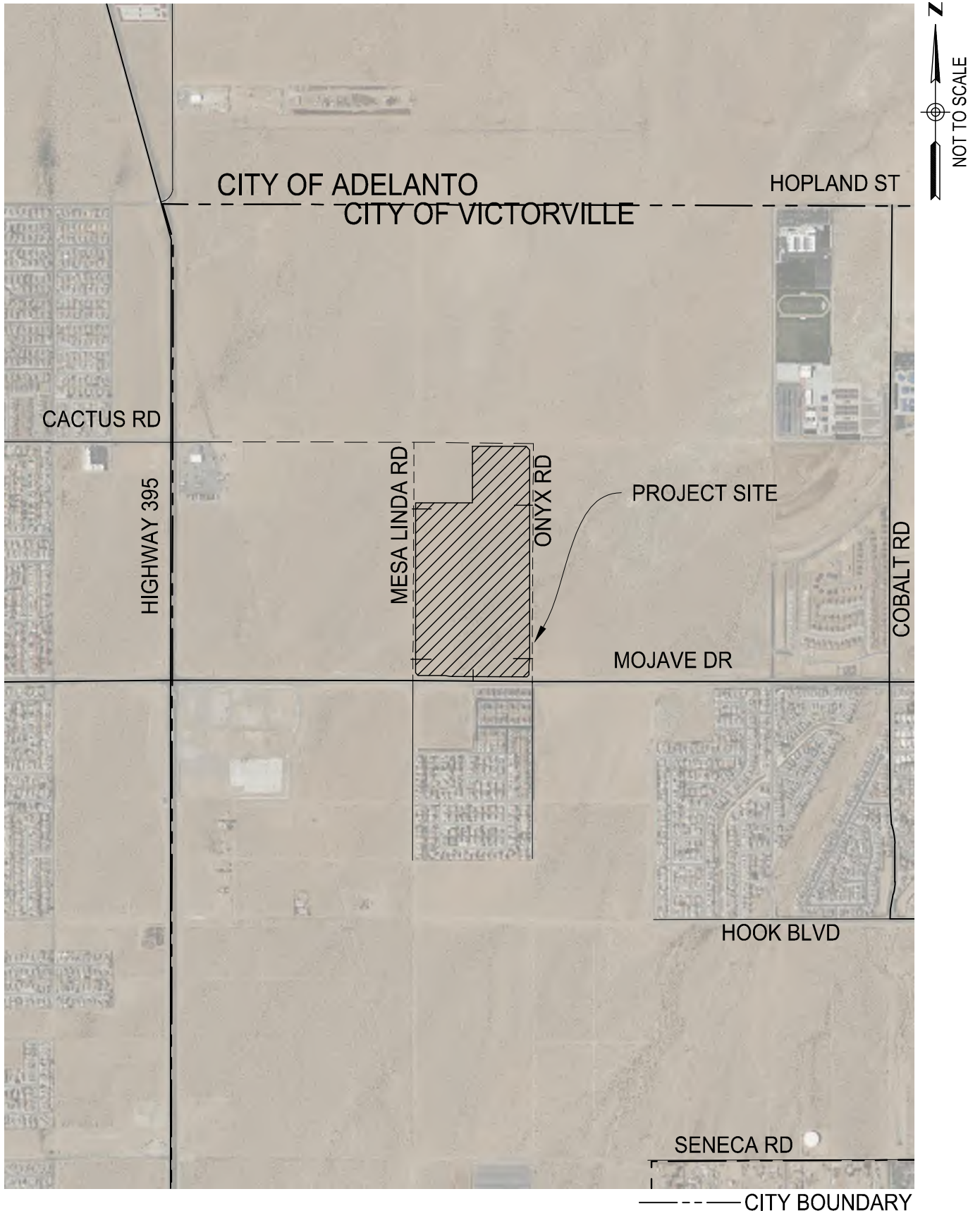


FIGURE 1: VICINITY MAP
PROPOSED INDUSTRIAL SITE
VICTORVILLE, CALIFORNIA

