TRAFFIC IMPACT STUDY

LOS ANGELES
201 S. Figueroa St, Suite 240
Los Angeles, CA 90012
213.337.3680
Fax :213.337.3679

ONTARIO
4141 E. Inland Empire Blvd, Suite 250
Ontario, CA 91764
909.481.5750
Fax :909.481.5757

SAN DIEGO
3530 Camino Del Rio North, Suite 105 San Diego, CA 92108
619.400.0600
Fax: 619.400.0599

SANTA CLARITA
25152 Springfield Ct, Suite 350
Santa Clarita, CA 91355
661.284.7400
Fax 661.284.7401

TEMECULA
41951 Remington Ave, Suite 220
Temecula, CA 92590
951.294.9300
Fax: 951.294-9301

TUSTIN
17782 17th St, Suite 200
Tustin, CA 92780
714.665.4500
Fax: 714.665.4501

VICTORVILLE
18484 Outer Highway 18 North, Suite 225
Apple Valley, CA, 92307
760.524.9100
Fax 760.524.9101

www.deainc

PROPOSED ADELANTO INDUSTRIAL PARK A.P.N 0459-451-60 to 62, 0459-451-51 to 59,0459-841-01 to 15

ADELANTO, CALIFORNIA

Prepared by:



DAVID EVANS AND ASSOCIATES INC.

REVISED
August 24, 2026

DAVID EVANS
AND ASSOCIATES INC.

August 24, 2026 Job No. MKLT0000-0001

Mileski Living Trust
C/O Jessica Haughton, Synergy Consulting CA
1971 W. 190th Street Ste 100
Torrance, CA 90504

RE: REVISED TRAFFIC STUDY – PROPOSED ADELANTO INDUSTRIAL PARK LOCATED AT AIR EXPRESSWAY AND ADELANTO ROAD, IN ADELANTO, CALIFORNIA

Dear Jessica,

David Evans and Associates, Inc. is pleased to submit this revised traffic study for the previously approved Adelanto Industrial Park. The reason for the revisions is the elimination of the phasing of the project analyzed in the previous draft dated December 17,2025. The phasing plan has been replaced with a single-phase project with completion in the year 2030.

In 2009, the City of Adelanto approved the Environmental Impact Report for the Adelanto Gateway Logistics Center on the project site. Since the approval of the environmental document and, subsequently, the previous development proposal, the owners have revised the site plan. This traffic study is intended to address the changes in the site plan and changes to the city's General Plan circulation plan that have occurred since the project was approved in 2009.

The revised Adelanto Industrial Park site plan consists of seven warehouse buildings on 456.73 acres of land, located in the City of Adelanto, California.

This report meets the City's requirements for preparing a Level of Service Assessment of local intersections to identify potential near-term and cumulative degradation of the City's level of service policies and was prepared in accordance with the city's traffic impact study guidelines.

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.

James M. Daisa, P.E.
Senior Project Manager / Associate



TABLE OF CONTENTS

1 EXECUTIVE SUMMARY 1
1.1 Project Description 1
1.2 Project-Specific Off-Site Transportation Improvements 1
1.3 City of Adelanto Intersection Level of Service Policies 1
1.4 Level of Service Comparison With and Without Project - Opening Year 2030 Conditions 1
1.5 Level of Service Comparison With and Without Project - Future Year 2046 Conditions 2
1.6 Future Year 2046 Conditions – LOS Deficiency Mitigation 2
1.7 Future Year 2046 Conditions – Fair-Share Calculations 4
2 INTRODUCTION 5
2.1 Scenario Definitions 5
3 EXISTING CONDITIONS 8
3.1 City of Adelanto and Caltrans Intersection Level of Service Policies 8
3.2 Local and Major Roadways 8
3.3 Site Access 9
3.4 Study Intersections 9
3.5 Existing Traffic Volumes 9
3.6 Intersection Capacity Analysis Methodology 11
3.7 Existing Traffic Analysis 11
3.8 Traffic Signal Warrant Analysis 13
4 OPENING YEAR 2030 WITHOUT PROJECT CONDITIONS 14
4.1 Opening Year 2030 Without Project Conditions Traffic Analysis 14
4.2 Traffic Signal Warrant Analysis 14
5 OPENING YEAR 2030 WITH PROJECT CONDITIONS 16
5.1 Project Description and Trip Generation 16
5.2 Project Trip Distribution and Assignment 17
5.3 Project Specific Improvements 19
5.4 Opening Year 2030 With Project Traffic Analysis 20
5.5 Traffic Signal Warrant Analysis 21
5.6 Site Access 24
6 FUTURE YEAR 2046 CONDITIONS WITHOUT PROJECT 27
6.1 Future Year 2046 Conditions Traffic Analysis 27
6.2 Traffic Signal Warrant Analysis 27
7 FUTURE YEAR 2046 WITH PROJECT CONDITIONS 29
7.1 Future 2046 With Project Traffic Analysis 29
7.2 Traffic Signal Warrant Analysis 32
7.3 Future Year 2046 Conditions – LOS Deficiency Mitigation 32
7.4 Future Year 2046 Conditions – Fair-Share Calculations 33
8 APPENDICES 34

LIST OF FIGURES

Figure 1: Vicinity Map 6
Figure 2: Site Plan 7
Figure 3: Existing PCE Traffic Volumes 10
Figure 4: Existing Intersection Geometrics 12
Figure 5: Opening Year 2030 PCE Traffic Volumes 15
Figure 6: Project Total PCE Trips 18
Figure 7: Opening Year 2030 Plus Project PCE Traffic Volumes 22
Figure 8: Opening Year 2030 Plus Project Intersection Geometrics 23
Figure 9: Future Year 2046 PCE Traffic Volumes 28
Figure 10: Future Year 2046 Plus Project PCE Traffic Volumes 30
Figure 11: Future Year 2046 Plus Project Intersection Geometrics 31

LIST OF TABLES

Table 1-1: Intersection Level of Service Comparison With and Without Project - Opening Year 2030 3
Table 1-2: Intersection Level of Service Comparison With and Without Project - Future Year 2046 3
Table 1-3: Fair-Share Percentages - Project Buildout in Future 2046 With Project Conditions 4
Table 3-1: HCM 6 – LOS Criteria for Signalized Intersections 11
Table 3-2: HCM 6 – Level of Service Criteria for Two-Way Stop Controlled (TWSC) Intersections 11
Table 3-3: Intersection Capacity Analysis – Existing Conditions 11
Table 4-1: Intersection Capacity Analysis – Opening Year 2030 Without Project Conditions 14
Table 5-1: Project Trip Generation 17
Table 5-2: Intersection Level of Service Comparison With and Without Project - Opening Year 2030 21
Table 6-1: Intersection Capacity Analysis –Future Year 2046 Without Project Conditions 27
Table 7-1: Intersection Level of Service Comparison With and Without Project - Future Year 2046 29
Table 7-2: Intersection Capacity Analysis – Future 2046 With Project Mitigation Measures 33
Table 7-3: Fair-Share Percentages - Project Buildout in Future 2046 Conditions 33

LIST OF APPENDICES

Appendix A: Approved Traffic Scope
Appendix B: Traffic Counts
Appendix C: Project Trip Distribution and Assignment Figures
Appendix D: Forecast Model Volume Development
Appendix E: Intersection Capacity Analysis
Appendix F: Traffic Signal Warrant Analysis
Appendix G: Conceptual Geometric Plans**:** Conceptual Geometric Plans

1 EXECUTIVE SUMMARY

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

1.1 Project Description

In 2009, the City of Adelanto approved the Environmental Impact Report for the Adelanto Gateway Logistics Center on the project site. Since the approval of the environmental document and, subsequently, the previous development proposal, the owners have revised the site plan. This traffic study is intended to address the changes in the site plan and changes to the city's General Plan circulation plan that have occurred since the project was approved in 2009.

The project is located at the southeast corner of Air Expressway and Adelanto Road and consists of seven warehouse buildings. The buildings range in size from about 151,000 gross square feet of floor area to about 1,505,000 gross square feet totaling nearly 8,250,000 square feet of warehousing, an increase from the approximately 6,591,312 square feet in the approved project. Each building is assumed to be comprised of 80% High-Cube Transload and Short-Term Storage Warehouse (ITE Land Use Code 154) and 20% High-Cube Cold Storage Warehouse (ITE Land Use Code 157).

The project's individual buildings are accessed from the city streets bounding the project either directly from driveways or from new streets extending into the site which form an internal circulation system. Most of the buildings are accessed from driveways connecting to the internal circulation system. The internal circulation system is comprised of two primary north-south streets accessed from Air Expressway (Emerald Road and Mesa Linda Road) and one east-west street accessed from Adelanto Road (Joshua Avenue). There is no access proposed to the site from Rancho Road to the south despite the existence of an unimproved, but paved, Emerald Road that currently connects Air Expressway to Rancho Road. Through access to Rancho Road using Emerald Road will be closed because adequate clearance cannot be achieved under the Los Angeles Department of Water and Power (LADWP) high-tension transmission line corridor that crosses Emerald Road.

1.2 Project-Specific Off-Site Transportation Improvements

The project will be conditioned to implement the City of Adelanto's standard frontage improvements that might include dedication of right of way and constructing the half-width of the ultimate cross-section of Air Expressway, Adelanto Road and other public streets within or adjacent to the project site. Widening to accommodate left and right-turn lanes described in each section below occurs on the south side of Air Expressway. In addition, the project has proposed implementing access improvements including necessary street widening and traffic control devices at intersections providing access to the site. These "project-specific" off-site improvements are described in **Section 5.3**.

1.3 City of Adelanto Intersection Level of Service Policies

The City of Adelanto's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (July 2020) describes the policies and methods for complying with the new CEQA expectations for Vehicle Miles Traveled (VMT) analysis and the applicable Adelanto General Plan consistency requirements, which requires performing intersection level of service (LOS) analysis.

The City of Adelanto has adopted vehicle LOS policies that set standards for the performance of streets and intersections. These policies are contained in the City's General Plan and therefore apply to discretionary approvals of new land use and transportation projects.

The City of Adelanto requires mitigation to maintain the General Plan goal of LOS D on all its roadways. This level of service policy applies to local Adelanto roadways, roads of regional importance as part of the City's Congestion Management Program (CMP) network, and State Highways.

1.4 Level of Service Comparison With and Without Project - Opening Year 2030 Conditions

Table 1-1, on the following page, compares the weekday peak hour intersection level of service (LOS) between the Opening Year 2030 conditions scenario and the Opening Year 2030 plus Project conditions scenario. Opening

Year 2030 represents the project's completion year and includes ambient growth in traffic from regional and local development equaling 3.5 percent annually. The analysis of Opening Year 2030 plus Project conditions includes the project-specific off-site improvements described above.

In the opening year 2030 baseline conditions scenario, all the study intersections would operate at LOS D or better during the AM peak hour and PM peak hour except the intersection of Air Expressway / Emerald Rd operates at LOS D during the AM peak hour but a LOS F during the PM peak hour as a side-street stop-controlled intersection. As a result, this intersection is identified as a cumulative deficiency occurring prior to the addition of project traffic.

In the opening year 2030 with project conditions scenario, all the study intersections are anticipated to operate at LOS D or better during the AM peak hour and PM peak hour with the existing geometrics and the proposed project-specific off-site improvements to access intersections.

1.5 Level of Service Comparison With and Without Project - Future Year 2046 Conditions

Table 1-2, following Table 1-1, compares the weekday peak hour intersection level of service (LOS) between future year baseline 2046 conditions and future year 2046 with project conditions. Future year 2046 baseline forecasts (without project) are derived from the San Bernardino Countywide Traffic Analysis Model (SBTAM). Future year 2046 with project forecasts start with 2046 baseline forecasts and add project traffic. In **Table 5-2**, mitigation measures are presented (if feasible) above and beyond project-specific off-site improvements where there is a LOS deficiency without the project.

In the future year 2046 baseline conditions scenario, the intersection of Air Expressway / Adelanto Road is anticipated to operate at LOS E during the AM and PM peak hours, the intersection of Air Expressway / Emerald Road is expected to operate at LOS F in both peak hour hours, and the intersection of Air Expressway / Phantom West is anticipated to operate at LOS E during the AM peak hour. As a result, these intersections are identified as cumulative deficiencies occurring prior to the addition of project traffic.

A second eastbound left-turn lane would mitigate the LOS deficiency at the intersection of Air Expressway at Phantom West. The eastbound left-turn movement is a critical movement, and the additional capacity of a second left turn would be the most effective method of eliminating the AM peak hour LOS deficit under the appropriate circumstances. However, this measure is not feasible without considerable land acquisition on both sides of the road and other factors. See further discussion in Section 1.6.

1.6 Future Year 2046 Conditions – LOS Deficiency Mitigation

In the future year 2046 scenario, two intersections require additional capacity to improve deficient levels of service. These intersections include Air Expressway at Adelanto Road (operates at LOS E in both peak hours with or without the addition of project traffic) and Air Expressway at Phantom West (operates at LOS E in the AM peak hour with the addition of project traffic). The project does not cause these deficiencies but does contribute to them and the city may require the project to contribute its fair-share to the cost of mitigating the deficiencies.

1. Air Expressway at Adelanto Road: construct an exclusive northbound right-turn lane with right turn overlap phasing and optimize signal timing.

   Mitigating the LOS deficiency at the intersection of Air Expressway at Adelanto Road includes installing an exclusive northbound right-turn lane with right-turn overlap phasing resulting in LOS D in both peak hours. Currently, the northbound approach of Adelanto Road at Air Expressway operates with an exclusive left turn lane, a through lane, and a shared through-right lane.

   Widening the northbound approach to maintain two through lanes and an additional right turn lane so that right turn overlap phasing can be implemented improves the level of service in 2046 plus project conditions to a LOS D in both peak periods (as shown in **Table 1-2**).

   This mitigation requires land acquisition or dedication of the necessary right-of-way when the property on the NE corner of the intersection is developed.

Table 1-1: Intersection Level of Service Comparison With and Without Project - Opening Year 2030

Intersection	Intersection Control Type (With Project)	Opening Year 2030 Conditions Without Project [a]				Opening Year 2030 With Project Conditions				Change in Delay (Seconds)		Exceed the Criteria [b]	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM	AM	PM
1. Air Expressway / Adelanto Road	TS	23.5	C	26.4	C	40.9	D	46.3	D	17.4	19.9	NO	NO
2. Air Expressway / Gateway Drive[1]	TS	11.4	B	8.2	A	15.0	B	11.6	B	3.6	3.4	NO	NO
3. Air Expressway / Emerald Road[2]	SSSC / (TS)	27.6	D	50.8	F	31.5	B	24.9	C	3.9	-25.9	NO	NO
4. Air Expressway / Phantom West[5]	TS	36.4	D	29.8	C	41.0	C	30.7	C	4.6	0.9	NO	NO
5. Adelanto Road / Joshua Avenue[3]	(SSSC)	Future Intersection				16.7	D	19.4	C	Not Applicable		NO	NO
6. Air Expressway / Mesa Linda Rd[4]	(TS)	Future Intersection				18.4	B	5.8	A			NO	NO
7. Adelanto Road / Driveway #1[6]	(SSSC)	Future Intersection				14.2	B	13.9	B			NO	NO
8. Adelanto Road / Driveway #2[6]	(SSSC)	Future Intersection				13.8	B	12.5	B			NO	NO

Notes:

[a] Future Year 2046 baseline conditions do not include "project" traffic or project-specific off-site improvements. The "no build" or baseline "without project" analyses in all scenarios always represent conditions without the project.

[b] The criteria used to determine the project's responsibility with respect to a level of service deficiency is (1) if the addition of project traffic causes an intersection's level of service to change from a LOS D or better to a LOS E or F, it is a project-specific deficiency requiring mitigation, and (2) if the project adds any traffic to an intersection operating at a deficient LOS E or LOS F prior to the addition of project traffic, it is cumulative deficiency in which the project may need to contribute its fair share to the cost of mitigation.

Proposed Project-Specific Off-Site Improvements

[1]The implementation of the proposed addition of the full-access drive on the south leg, modification of the traffic signal, and optimizing the signal timing.
[2]The installation of a traffic signal and widening along Air Expressway to accommodate turning lanes.
[3]The installation of side street stop-control and extension of Joshua Avenue into the project site.
[4]The installation of a full-access traffic signal and construction of Mesa Linda Road internal to the project site.
[5]The construction of the south leg of the Air Expressway / Phantom West intersection, modification of the traffic signal, and widening of the south side of Air Expressway to accommodate lanes associated with the new south leg.
[6]Two project access driveways on Adelanto Road north of the Joshua Avenue intersection.

Abbreviations and Definitions:

TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left-turn lane.
Delay – seconds per vehicle, LOS – Level of Service

Adelanto may consider an interim measure that avoids having to acquire land. There is justification for converting the shared through-right lane to an exclusive right turn lane even on an interim basis until right of way is dedicated or acquired to allow widening of Adelanto Road to its General Plan buildout width as a major 4-lane facility. The northbound right turn volume is higher than the northbound through volume in all analysis scenarios analyzed in this study. The volume of right turns exceeding the through volume ranges from 61 (existing) to 324 (2046 + Project) in the AM peak and from 90 (existing) to 120 (2046 + Project) in the PM peak hour. Converting one northbound through lane to an exclusive right turn lane would change the northbound through volume to capacity ratio from 0.21 to 0.42 and likely maintain LOS D.

2. Air Expressway at Phantom West: a close evaluation of this intersection indicates the need for a second eastbound left turn lane given the projected left turn volume in 2046 exceeds 900 vehicles in the AM peak hour (there are currently 556 eastbound left turns in the AM peak hour). The volume to capacity ratio of the left turn will increase from 0.68 (existing AM) to 0.79 (future 2046 AM) to 0.98 (future 2046 + project AM). However, this improvement will require land acquisition or dedication on the north and south side of Air Expressway. Land dedication or acquisition on the north side of Air Expressway won't occur until development of the vacant property in the northwest corner of the intersection. If the widening and required transitions were implemented only on the south side of Air Expressway, the road's cross-section would be asymmetrical and make it difficult to implement dual left turn lanes in the opposite direction should they be required in the future.

This study finds that implementation of the second eastbound left turn lane to be infeasible currently. Other alternative measures were explored but did not resolve the level of service deficit.

Table 1-2: Intersection Level of Service Comparison With and Without Project - Future Year 2046

Intersection	Control Type	Future Year 2046 Without Project Conditions [a]				Future Year 2046 With Project Conditions				Change in Delay (Seconds)		Exceed the Criteria [b]	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM	AM	PM
1. Air Expressway / Adelanto Road[0]	TS	55.3	E	55.8	E	56.0	E	68.3	E	0.7	8.4	YES	YES
Mitigation: widen NB approach to include a new right turn lane (land acquisition required), implement NB right turn overlap phasing, and optimize signal timing		Not Applicable				41.1	D	48.5	D	-14.2	-11.4	NO	NO
2. Air Expressway / Gateway Drive[1]	TS	11.7	B	10.8	B	18.5	B	11.7	B	7.6	3.2	NO	NO
3. Air Expressway / Emerald Road[2]	SSSC / (TS)	58.3	F	108.4	F	39.8	D	27.0	C	-18.5	-81.4	NO	NO
4. Air Expressway / Phantom West[5]	TS	75.6	E	52.6	D	63.1	E	32.9	C	-12.5	-19.7	YES	NO
Mitigation: none	TS	No feasible measures beyond the project-specific off-site improvements to improve LOS deficiency in the AM peak hour											
5. Adelanto Road / Joshua Avenue[3]	(SSSC)	Future Intersection				19.1	C	21.9	C	Not Applicable		NO	NO
6. Air Expressway / Mesa Linda Road[4]	(TS)	Future Intersection				18.1	B	7.4	A			NO	NO
7. Adelanto Road / Driveway #1[6]	(SSSC)	Future Intersection				15.8	C	16.3	C			NO	NO
8. Adelanto Road / Driveway #2[6]	(SSSC)	Future Intersection				16.0	C	14.7	B			NO	NO

Notes:
[a] Future Year 2046 baseline conditions do not include "project" traffic or project-specific off-site improvements. The "no build" or baseline "without project" analyses in all scenarios always represent conditions without the project.

[b] The criteria used to determine the project's responsibility with respect to a level of service deficiency is (1) if the addition of project traffic causes an intersection's level of service to change from a LOS D or better to a LOS E or F, it is a project-specific deficiency requiring mitigation, and (2) if the project adds any traffic to an intersection operating at a deficient LOS E or LOS F prior to the addition of project traffic, it is cumulative deficiency in which the project may need to contribute its fair share to the cost of mitigation.

Proposed Project-Specific Off-Site Improvements

[0]There are no project-specific off-site improvements at this intersection.
[1]The implementation of the proposed addition of the full-access drive on the south leg, modification of the traffic signal, and optimizing the signal timing.
[2]The installation of a traffic signal and widening along Air Expressway to accommodate turning lanes.
[3]The installation of side street stop control and extension of Joshua Avenue into the project site.
[4]The installation of a full-access traffic signal and construction of Mesa Linda Road internal to the project site.
[5]The construction of the south leg of the Air Expressway / Phantom West intersection, modification of the traffic signal, and widening of the south side of Air Expressway to accommodate lanes associated with the new south leg.
[6]Two project access driveways on Adelanto Road north of the Joshua Avenue intersection.

Abbreviations and Definitions:
TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left turn lane.
Delay – seconds per vehicle, LOS – Level of Service

1.7 Future Year 2046 Conditions – Fair-Share Calculations

Table 1-3 presents the calculation of the project's fair-share contribution to the intersections requiring mitigation under project buildout conditions in the future 2046 scenario, where feasible. Consistent with Adelanto's transportation impact analysis guidelines, the formula shown below is used to calculate the project's fair-share contribution.

$$\text{Fair Share \%} = \frac{\text{Project Buildout Trips Using Intersection}}{\text{[Future 2046 + Project Traffic Volumes – Existing Traffic Volumes]}}$$

While the table identifies a different fair share percentage for the AM and PM peak hours, municipalities typically select the highest of the peak hours as the project's fair-share contribution.

Table 1-3: Fair-Share Percentages - Project Buildout in Future 2046 With Project Conditions

Intersection	Existing Volumes		Future Year 2046 Volumes		Project Trips (Buildout)		Future 2046 + Project Vols		Fair-Share (%)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Adelanto Rd / Air Expressway	1565	1703	2,698	2,785	668	803	3366	3588	37%	43%

Notes:
The fair-share percentage is calculated using the following formula: FS% = Project Buildout Vol / [Fut. 2046+Proj – Existing]

2 INTRODUCTION

This report identifies the traffic impacts and presents recommendations for access and traffic mitigation for the proposed Industrial park in the City of Adelanto, California. The proposed project consists of seven new warehouse buildings consisting of 8,256,274 square feet of warehousing.

Figure 1 provides a vicinity map, and **Figure 2** illustrates the proposed project site plan. The intent of this report is to evaluate potential LOS deficits requiring improvements caused or contributed to by the proposed development in accordance with the City of Adelanto's traffic impact study requirements and under the following scenarios:

- Existing Conditions
- Opening Year 2030 Conditions Without Project
- Opening Year 2030 With Project Conditions
- Future Year 2046 Conditions Without Project
- Future Year 2046 With Project Conditions

2.1 Scenario Definitions

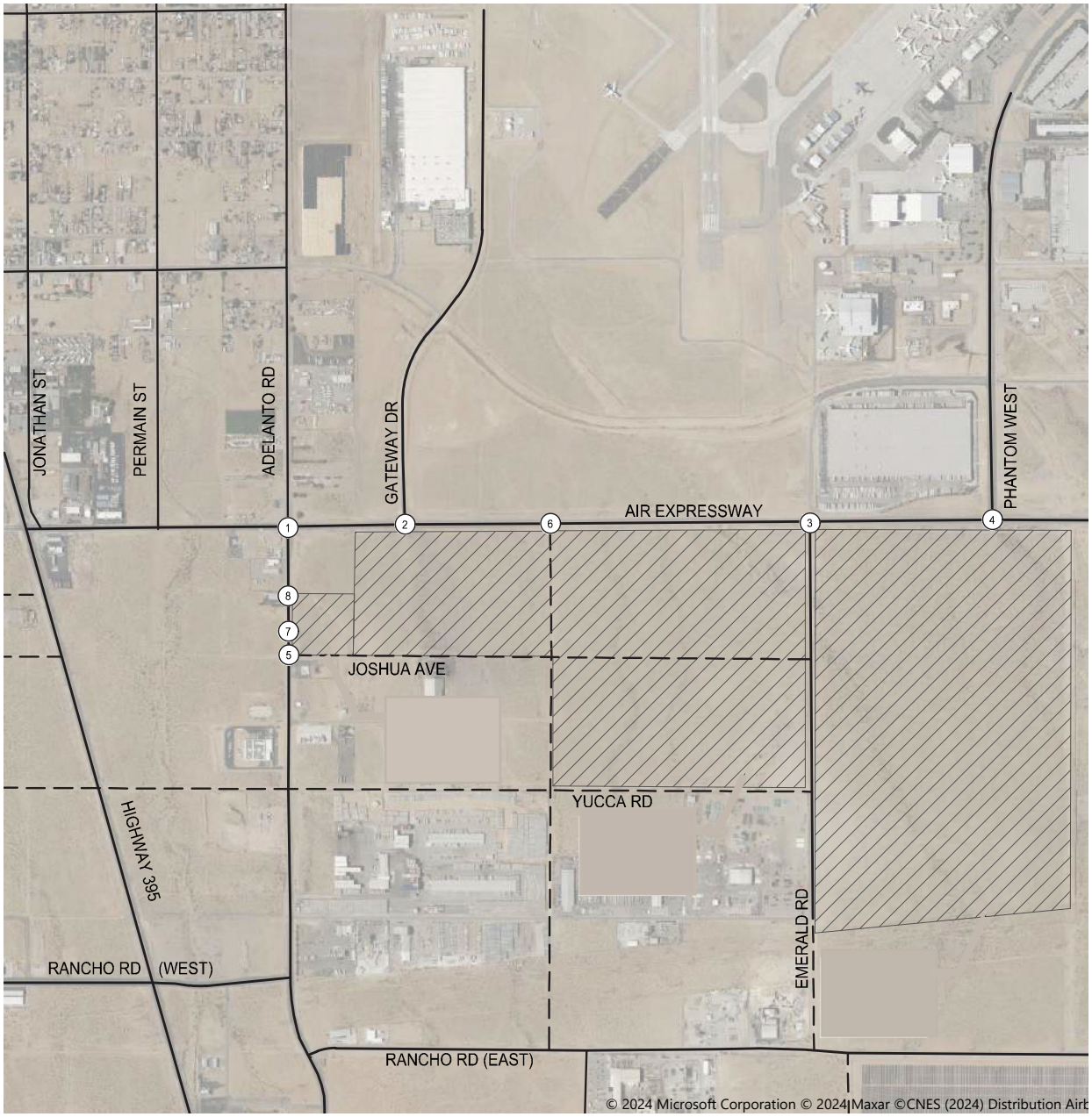
Existing Conditions. This scenario represents existing transportation conditions at the time this report was prepared. Data includes traffic counts collected in May 2023, August 2023, October 2023, and April 2024 and current roadway and intersection geometries. The existing volumes are used throughout the forecasting of each scenario.

Opening Year 2030 Conditions Without Project This scenario represents conditions, for analysis purposes, at the time the project is anticipated to be constructed and occupied (2030) but without traffic generated by the project. The ambient growth is a general rate of growth in traffic from overall regional development (assumed to be 3.5% annually for this study).

Opening Year 2030 With Project Conditions. This scenario adds the project's estimated buildout traffic generation to the opening Year 2030 plus project conditions scenario described above. This scenario also includes the project-specific off-site improvements. 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 beyond the project-specific off-site improvements.

Future Year 2046 Conditions Without Project. This scenario represents regional ambient growth in traffic up to the Year 2046. Ambient growth derived from forecasts from the San Bernardino County Transportation Analysis Model (SBTAM).

Future Year 2046 With Project Conditions. This scenario adds the project's estimated buildout traffic generation to the future Year 2046 without project scenario described above. 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 beyond the project-specific off-site improvements.



N

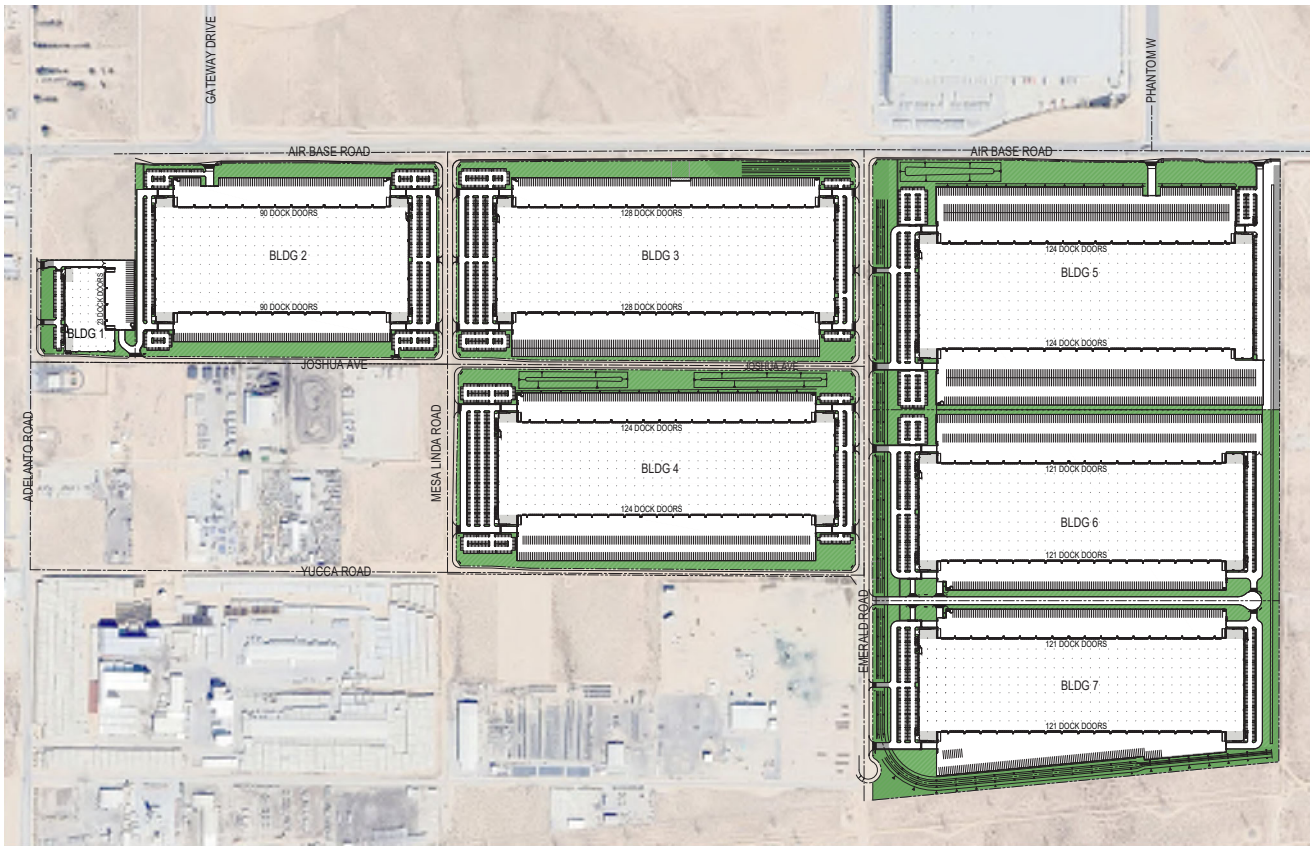
NOT TO SCALE

(#) - STUDY INTERSECTIONS

DAVID EVANS AND ASSOCIATES INC.

FIGURE 1: VICINITY MAP
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TTE\EXHIBITS\Study\Figure 1.dwg
Last Opened: Jul 11, 2025 - 8:58pm by: Tmm



DAVID EVANS AND ASSOCIATES INC.

FIGURE 2: SITE PLAN
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIEXHIBITS\Study\Figure 2.dwg
Last Opened: Jul 17, 2026 - 4:52pm by: Tmm

3 EXISTING CONDITIONS

The proposed project consists of seven warehouse buildings on 456.73 acres in the City of Adelanto. The proposed project is located south of Air Expressway and east of Adelanto Road. Each of the buildings are made up of 80% High-Cube Transload and Short-Term Storage Warehouse (ITE 154) and 20% High-Cube Cold Storage Warehouse (ITE 157).

3.1 City of Adelanto and Caltrans Intersection Level of Service Policies

The City of Adelanto's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (July 2020) outline the policies and methods for complying with the new CEQA expectations for Vehicle Miles Traveled (VMT) analysis and the applicable Adelanto General Plan consistency requirements, which requires performing intersection level of service (LOS) analysis.

The City of Adelanto has adopted vehicle LOS policies that set standards for which local agency infrastructure will strive to maintain. These policies are contained in the City's General Plan and therefore apply to discretionary approvals of new land use and transportation projects.

The City of Adelanto requires mitigation to maintain the General Plan goal of LOS D on all its roadways. This level of service policy applies to local Adelanto roadways, roads of regional importance as part of the City's Congestion Management Program (CMP) network and State Highways.

The Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) states "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" (see Appendix "C-3") on State Highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency (City of Adelanto) consult with Caltrans to determine the appropriate target LOS". This policy is consistent with Caltrans' practice of setting level of service thresholds for State Highway facilities equal to the threshold of the jurisdiction where the facility is located. For this study, the City's LOS D is assumed to be the minimum level of service criteria for the study intersections.

3.2 Local and Major Roadways

Within the study area, the limit line between the City of Adelanto and the City of Victorville runs along the centerline of Air Expressway from west of Gateway Drive to east of Phantom West. As a result, the north half of Air Expressway is in Victorville's jurisdiction while the south half is within Adelanto's jurisdiction. In this shared segment of Air Expressway, existing "T" intersections in the City of Victorville include Gateway Drive and Phantom West and existing (and proposed) intersections within the City of Adelanto include Mesa Linda Road and Emerald Road.

Air Expressway is a major east-west primarily four-lane road (two lanes in each direction, a striped center lane, and turn pockets at key intersections) in the project area. Air Expressway is identified as a major street on the City of Adelanto Circulation Plan and as a super arterial on the City of Victorville Circulation Map. The posted speed limit within the project area is 60 mph.

Adelanto Road is a major north-south primarily four-lane road (two lanes in each direction, a striped center lane, and turn pockets at key intersections) in the project area. Adelanto Road is identified as a major boulevard on the City of Adelanto Circulation Plan south of El Mirage Road. The posted speed limit within the project area is 40 mph.

Gateway Drive is a north-south primarily four-lane road (two lanes in each direction, a raised median, and turn pockets at key intersections) in the project area. Gateway Drive, north of Air Expressway, is identified as a super arterial on the City of Victorville Circulation Map The posted speed limit within the project area is 45 mph.

Emerald Road is a local north-south primarily two-lane road (one-lane in each direction) in the project area. The City of Adelanto deleted Emerald Road as a Circulation Element street in 2025 because it cannot cross the Los Angeles Department of Water and Power (LADWP) high-tension transmission line corridor. Emerald Road will "T" at Air Expressway and not be extended north into Victorville.

Phantom West is primarily a four-lane road (two lanes in each direction, a striped center lane, and turn pockets at key intersections) in the project area. Phantom West is identified as a super arterial on the City of Victorville Circulation Map. The posted speed limit within the project area is 50 mph.

3.3 Site Access

The project's warehouse buildings are oriented with long sides in the east-west direction. The buildings are accessed from their narrow ends where employee and guest parking lots are located as well as the gated entries for trucks accessing the secure loading dock and trailer parking areas.

- Building 1 gains access from driveways on Adelanto Road and Joshua Avenue.
- Building 2 gains access from driveways on Air Expressway, Mesa Linda Road, and Joshua Avenue.
- Building 3 gains access from driveways on Air Expressway, Mesa Linda Road, Joshua Avenue, and Emerald Road.
- Building 4 gains access from driveways on Mesa Linda Road and Emerald Road.
- Building 5 gains access from driveways on Air Expressway and Emerald Road.
- Building 6 and Building 7 gain access from driveways on Emerald Road.

Currently, the project's proposed access roads of Mesa Linda Road, Joshua Avenue, and Emerald Road are unimproved and unpaved roads that will require constructing part or full improvements concurrently with the project depending on whether the project has fronting development on one, both, or neither side of these streets.

Adelanto's General Plan Circulation Plan (January 2023) designates Mesa Linda Road as a collector street and Joshua Avenue as a local street. Required land dedication and level of street improvements are identified in **Section 5.3** and **Appendix G**.

3.4 Study Intersections

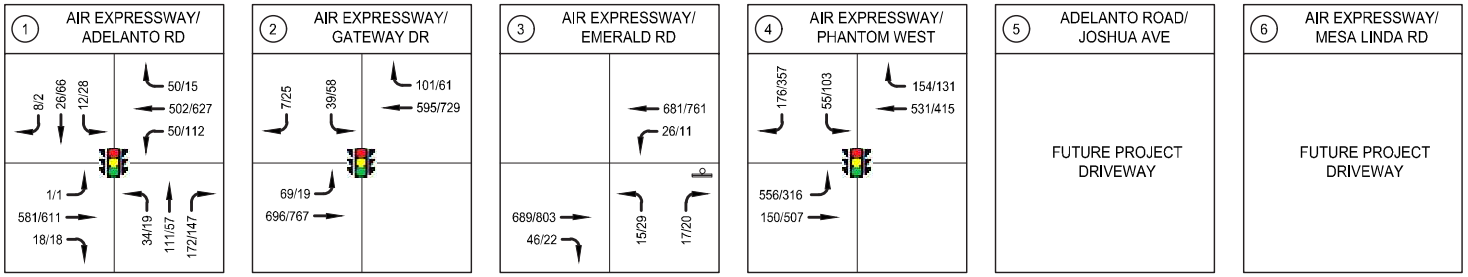
The project would potentially affect the following intersections:

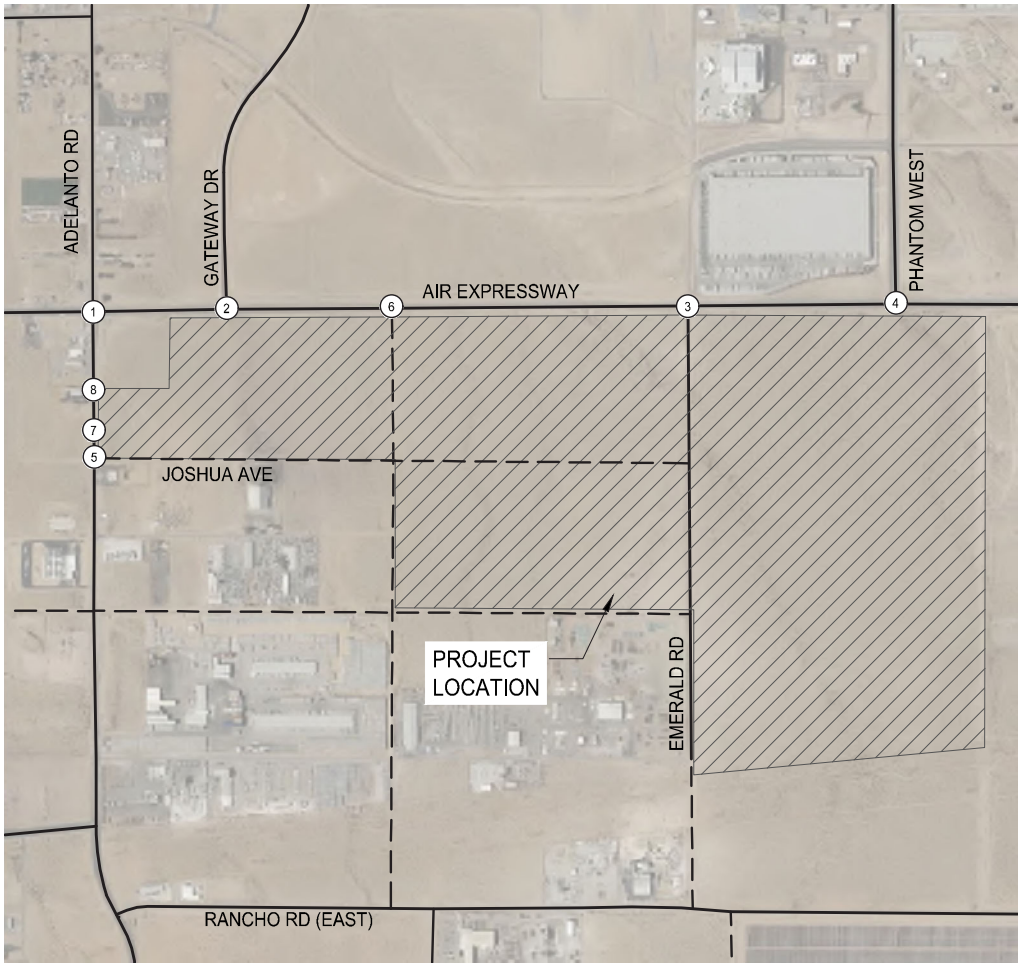
1. Air Expressway / Adelanto Road
2. Air Expressway / Gateway Drive
3. Air Expressway / Emerald Road
4. Air Expressway / Phantom West
5. Adelanto Road / Joshua Avenue (future intersection)
6. Air Expressway / Mesa Linda Road (future intersection)
7. Adelanto Road / Driveway #1 (future intersection)
8. Adelanto Road / Driveway #1 (future intersection)

The intersections of Air Expressway at Adelanto Road, Air Expressway at Gateway Drive, and Adelanto Road at Phantom West are currently signalized. The intersection of Air Expressway at Emerald Road is currently side street stop controlled.

3.5 Existing Traffic Volumes

Turn movement counts were conducted in May 2023, August 2023, October 2023, and April 2024 by Newport Traffic Studies, an independent traffic data collection company. These counts were collected during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods. The existing turn movement counts are included in **Appendix B** of this study. **Figure 3** illustrates the existing peak hour traffic volumes in the study area.





N

NOT TO SCALE

7 ADELANTO ROAD/ PROJECT DRIVEWAY "A"

FUTURE PROJECT DRIVEWAY

8 ADELANTO ROAD/ PROJECT DRIVEWAY "B"

FUTURE PROJECT DRIVEWAY

LEGEND

XX/XX - AM/PM PCE TRAFFIC VOLUMES

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

FIGURE 3: EXISTING PCE TRAFFIC VOLUMES
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 3.dwg
Last Opened: Jul 17, 2026 - 4:53pm by: Tinn

3.6 Intersection Capacity Analysis Methodology

Intersection level of service (LOS) is determined using Synchro software which implements the methodology in Chapter 19, Chapter 20, and Chapter 21 of the Highway Capacity Manual, 6th Edition (HCM 6) and conforms to the procedures and assumptions in the City's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS). The intersection analyses use existing intersection geometrics and existing traffic volumes in determining AM and PM peak hour intersection level of service. **Table 3-1** provides LOS thresholds for signalized intersections as provided in HCM 6 Chapter 19.

Table 3-1: HCM 6 – LOS Criteria for Signalized Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio [a]	
	≤1.0	>1.0
≤ 10	A	F
> 10 - 20	B	F
> 20 - 35	C	F
> 35 - 55	D	F
> 55 - 80	E	F
> 80	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.		

The level of service for a Two-Way Stop Controlled (TWSC) intersection is determined by the computed or measured control delay. The LOS is determined for each minor-street movement (or shared movement) by using the criteria provided in **Table 3-2**.

Table 3-2: HCM 6 – Level of Service Criteria for Two-Way Stop Controlled (TWSC) Intersections

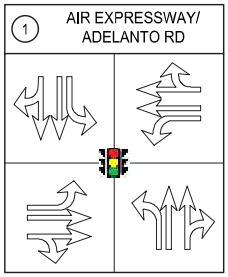
Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤1.0	v/c >1.0
0 - 10	A	F
> 10 -15	B	F
> 15 - 25	C	F
> 25 - 35	D	F
> 35 - 50	E	F
> 50	F	F
Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for the uncontrolled major-Street approaches or the entire intersection. Source: Highway Capacity Manual 6th Edition, Exhibit 20-2.		

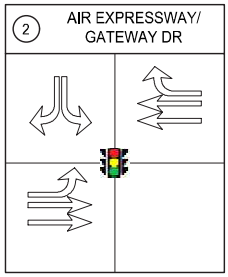
3.7 Existing Traffic Analysis

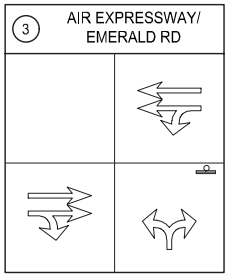
Existing intersection geometrics and existing AM and PM peak hour traffic counts are used in analyzing existing intersection capacity. **Table 3-3** and **Appendix E** provide the results of the analysis. **Figure 4** illustrates the existing intersection geometrics utilized in the capacity analysis.

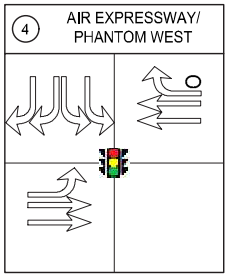
Table 3-3: Intersection Capacity Analysis – Existing Conditions

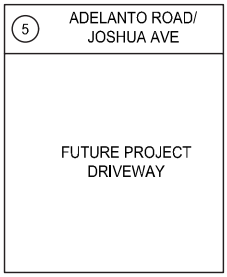
Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Air Expressway / Adelanto Road	TS	22.7	C	25.1	C
2. Air Expressway / Gateway Drive	TS	11.2	B	8.0	A
3. Air Expressway / Emerald Road	SSSC	23.4	C	36.7	E
4. Air Expressway / Phantom West	TS	33.9	C	28.8	C
5. Adelanto Road / Joshua Avenue	SSSC	Future Intersection with Project			
6. Air Expressway / Mesa Linda Road	TS	Future Intersection with Project			
7. Adelanto Road / Driveway #1	SSSC	Future Intersection with Project			
8. Adelanto Road / Driveway #2	SSSC	Future Intersection with Project			
Abbreviations and Definitions: TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, Delay – seconds per vehicle, LOS – Level of Service					

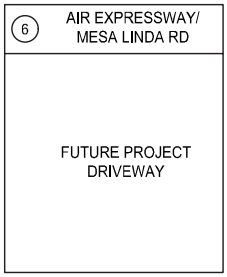


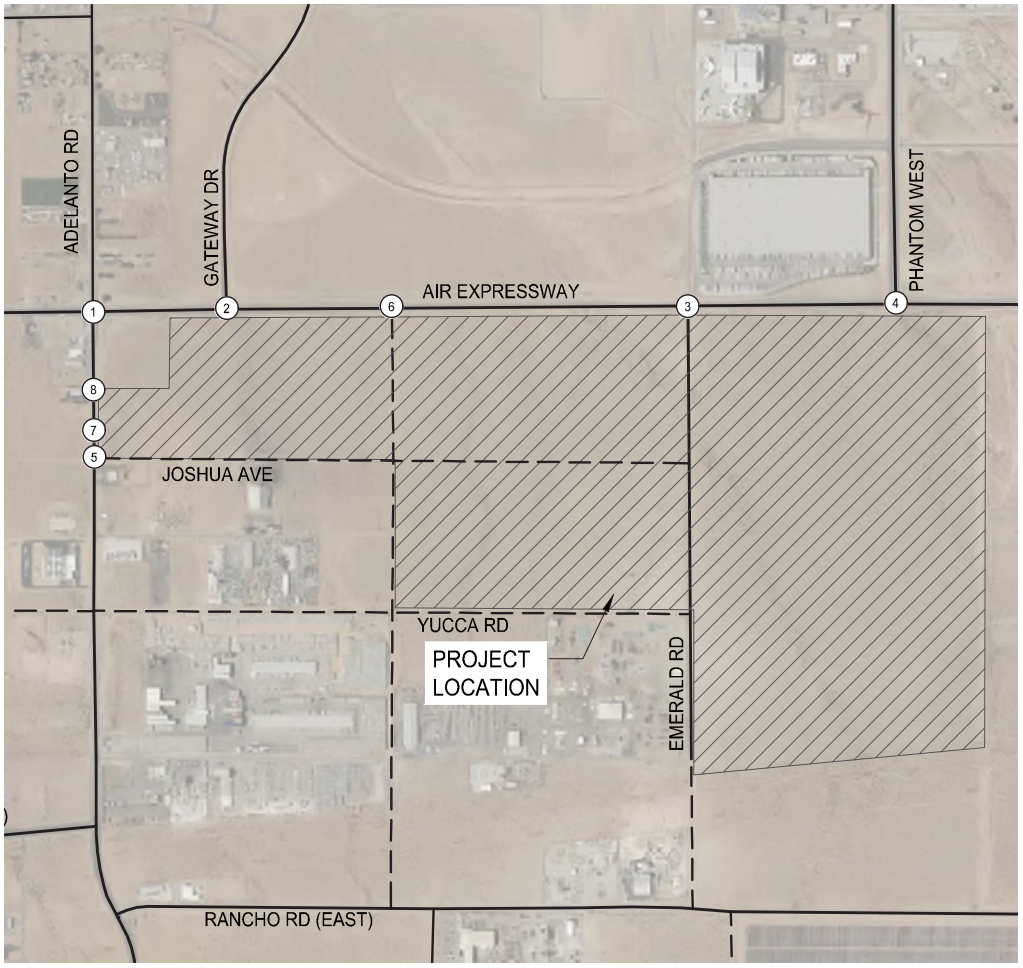




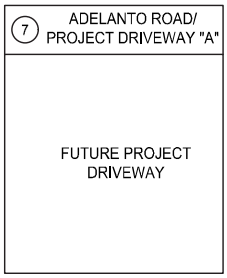


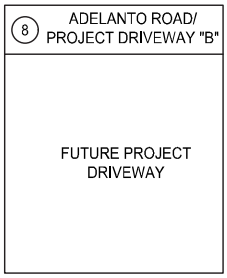












LEGEND

- EXISTING GEOMETRICS
- (#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION
- O - RIGHT TURN OVERLAP PHASING

DAVID EVANS AND ASSOCIATES INC.

FIGURE 4: EXISTING INTERSECTION GEOMETRICS
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 4.dwg
Last Opened: Jul 17, 2026 - 4:54pm by: Tmm

As presented in **Table 3-3***,* under existing conditions, all of the study intersections operate at an efficient level of service under both the AM peak hour and PM peak hour.

3.8 Traffic Signal Warrant Analysis

Under existing conditions, only Warrant #3 (peak hour volume) is evaluated. Traffic signal warrant worksheets are provided in **Appendix F**. At the intersection of Air Expressway at Emerald Road, the maximum volume from the minor street of Emerald Road is 49 vehicles during the PM peak hour. This is below the minimum threshold of 75 vehicles, and as such, does not meet the CA MUTCD warrant #3 justifying installation of a traffic signal.

4 OPENING YEAR 2030 WITHOUT PROJECT CONDITIONS

The opening Year 2030 without project conditions scenario evaluates impacts due to ambient growth in traffic and traffic generated by other area development projects within the study area up to the Year 2030 when project construction is expected to be completed.

The ambient growth is a general rate of growth in traffic from overall regional development (assumed to be 3.5% annually for this study).

4.1 Opening Year 2030 Without Project Conditions Traffic Analysis

The opening Year 2030 conditions intersection capacity analysis uses existing intersection geometrics and the projected AM and PM peak hour traffic shown in **Figure 5**. **Table 4-1** and **Appendix E** provides the results of the analysis.

Table 4-1: Intersection Capacity Analysis – Opening Year 2030 Without Project Conditions

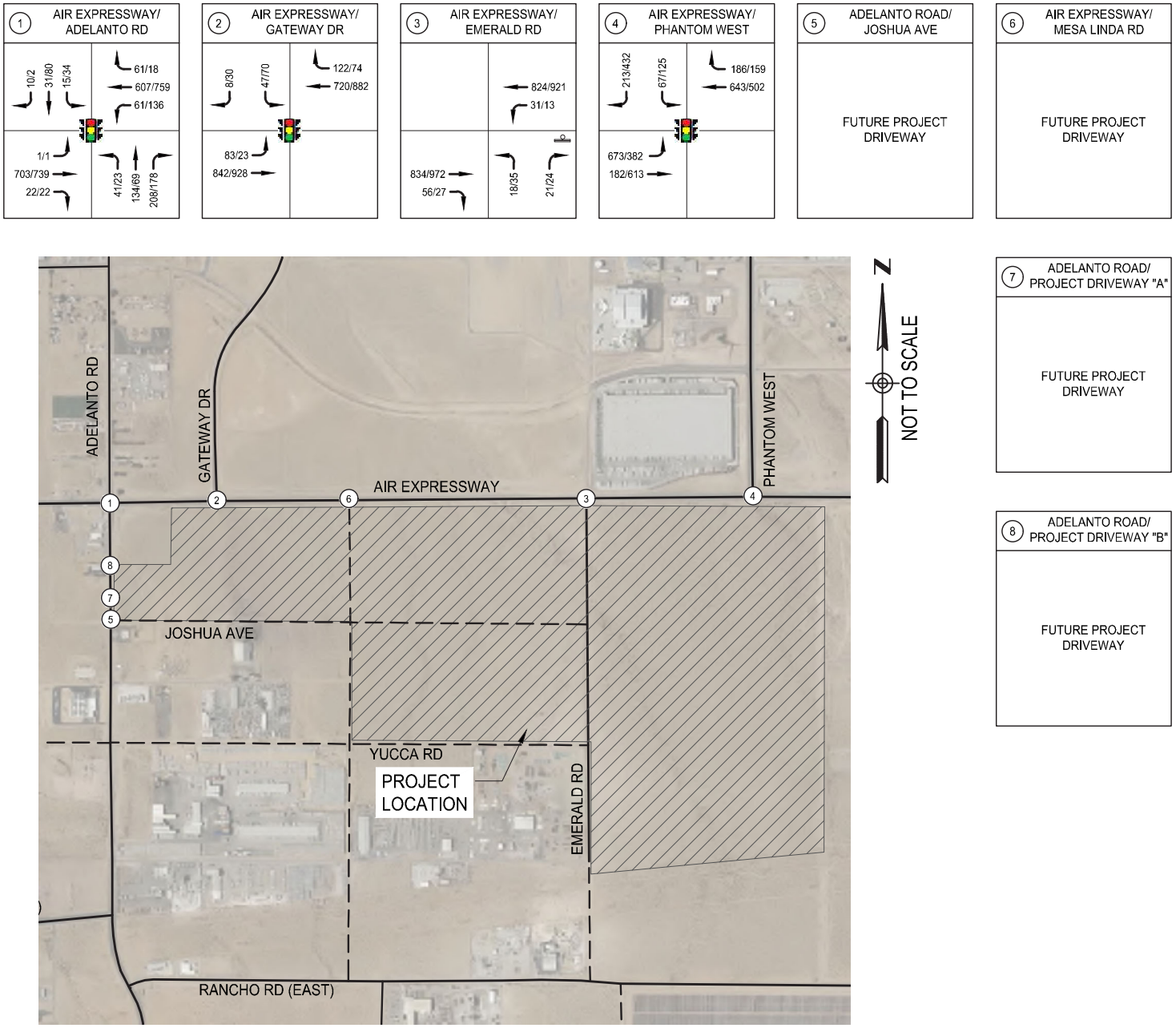
Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Air Expressway / Adelanto Road	TS	23.5	C	26.4	C
2. Air Expressway / Gateway Drive	TS	11.4	B	8.2	A
3. Air Expressway / Emerald Road	SSSC	27.6	D	50.8	F
4. Air Expressway / Phantom West	TS	36.4	D	29.8	C
5. Adelanto Road / Joshua Avenue	SSSC	Future Intersection with Project			
6. Air Expressway / Mesa Linda Road	SSSC	Future Intersection with Project			
7. Adelanto Road / Driveway #1	SSSC	Future Intersection with Project			
8. Adelanto Road / Driveway #2	SSSC	Future Intersection with Project			
Abbreviations and Definitions: TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left-turn lane Delay – seconds per vehicle, LOS – Level of Service					

As presented in **Table 4-1***,* under opening Year 2030 conditions, all of the study intersections are anticipated to operate at an acceptable level of service under both the AM peak hour and PM peak hour except for the intersection of Air Expressway / Emerald Rd operates at LOS D during the AM peak hour and LOS F during the PM peak hour. As a result, this intersection is identified as cumulative deficiencies occurring prior to the addition of project traffic.

4.2 Traffic Signal Warrant Analysis

In the opening Year 2030 conditions, only warrant #3 (peak hour volume) is evaluated. Traffic Signal Worksheets are provided in **Appendix F**.

At the intersection of Air Expressway at Emerald Road, the maximum volume from the minor street of Emerald Road is 59 vehicles during the PM peak hour. This is below the minimum threshold of 75 vehicles, and as such does not meet the CA MUTCD warrant #3 justifying installation of a traffic signal, particularly for northbound traffic turning from Emerald Road onto Air Expressway which requires a protected signal phase. However, engineering judgement concludes that a traffic signal is warranted at this intersection for safety reasons. Further, a westbound left-turn deceleration and storage lane is necessary to remove turning traffic from the inside through lane as currently configured and eliminates concerns related to potential rear-end collisions.



LEGEND

XX/XX - AM/PM PCE TRAFFIC VOLUMES

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

FIGURE 5: OPENING YEAR 2030 PCE TRAFFIC VOLUMES ADELANTO INDUSTRIAL PARK ADELANTO, CA

DAVID EVANS AND ASSOCIATES INC.

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 5.dwg
Last Opened: Jul 17, 2026 - 4:55pm by: Tmm

5 OPENING YEAR 2030 WITH PROJECT CONDITIONS

The opening Year 2030 plus project conditions scenario evaluates the potential cumulative impacts to the area network due to ambient growth and other area project trips up to the project opening day of 2030 with the addition of project traffic. This scenario adds the project's estimated traffic generation at opening day (2030) to the opening Year 2030 conditions scenario.

5.1 Project Description and Trip Generation

The proposed project consists of the construction of seven buildings of approximately 6,605,019 gross square feet High-Cube Transload and Short-Term Storage Warehouse (ITE 154) and 1,651,255 gross square feet High-Cube Cold Storage Warehouse (ITE 157) described below:

- Building 1: 151,186 GSF
  - 120,949 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 30,237 gross square feet High-Cube Cold Storage Warehouse
- Building 2: 1,139,727 GSF
  - 911,782 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 227,945 gross square feet High-Cube Cold Storage Warehouse
- Building 3: 1,505,304 GSF
  - 1,204,243 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 301,061 gross square feet High-Cube Cold Storage Warehouse
- Building 4: 1,331,796 GSF
  - 1,065,437 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 266,359 gross square feet High-Cube Cold Storage Warehouse
- Building 5: 1,493,139 GSF
  - 1,194,511 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 298,628 gross square feet High-Cube Cold Storage Warehouse
- Building 6: 1,348,811 GSF
  - 1,079,049 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 269,762 gross square feet High-Cube Cold Storage Warehouse
- Building 7: 1,286,311 GSF
  - 1,029,049 gross square feet High-Cube Transload and Short-Term Storage Warehouse
  - 257,262 gross square feet High-Cube Cold Storage Warehouse

The Institute of Transportation Engineers (ITE) Trip Generation manual, 11th Edition is the source of the trip generation rates for High-Cube Transload and Short-Term Storage Warehouse (ITE 154) and High-Cube Cold Storage Warehouse (ITE 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 source of the mode share split between passenger cars and trucks is the South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2013-2014) which is based on data from Amazon Fulfillment Center in San Bernardino.

Adelanto's TIS guidelines require the conversion of trucks into an equivalent number of passenger cars when conducting intersection capacity analyses to determine level of service. Passenger Car Equivalent (PCE) factors are industry standard conversion factors. The Passenger Car Equivalents (PCE) factors are provided by vehicle type and number of axles for trucks. Passenger Car Equivalent (PCE) factors are from the City of Hesperia's (a neighboring municipality in the Victor Valley) *Traffic Impact Analysis Report Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment* dated July 2020. The Passenger Car Equivalents (PCE) factors are provided by vehicle type and number of axles for trucks.

It is customary to convert heavy duty trucks into "passenger car equivalents" of PCEs when conducting operations analysis of intersections to simulate their impact on the capacity of an intersection. Converting trucks into PCE's accounts for the physical space that trucks occupy and their effect on the operational characteristics of

the intersection. For example, large trucks accelerate from a stop much slower than passenger cars, and this affects the "saturation flow rate" used in calculating intersection delay.

As presented in **Table 5-1**, the proposed project is estimated to generate about 17,913 daily PCE trips, 1,000 AM peak hour PCE trips, and 1,206 PM peak hour PCE trips.

Table 5-1: 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
1	High-Cube Transload and Short-Term Storage Warehouse (ITE 154) 80%	6,605.02	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						
			9,248	407	122	529	185	476	661
2	High-Cube Cold Storage Warehouse (ITE 157) 20%	1,651.25	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						
			3,501	140	42	182	55	143	198
		Subtotal	12,749	547	164	711	240	619	859
		Mode Share	Project Trip Generation by Vehicle Type						
	Passenger Cars (Percent of Total)	74.21%	9,461	406	122	528	178	459	637
	2-Axle Trucks (Percent of Total)	4.55%	580	25	7	32	11	28	39
	3-Axle Trucks (Percent of Total)	4.18%	533	23	7	30	10	26	36
	4-Axle Trucks (Percent of Total)	17.04%	2,172	93	28	121	41	105	146
		PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
	Passenger Cars)	1.0	9,461	406	122	528	178	459	637
	2-Axle Trucks	1.5	870	38	11	49	17	42	59
	3-Axle Trucks	2.0	1,066	46	14	60	20	52	72
	4 + Axle Trucks	3.0	6,516	279	84	363	123	315	438
Total Passenger Car Equivalents (PCE)			**17,913**	**769**	**231**	**1,000**	**338**	**868**	**1,206**

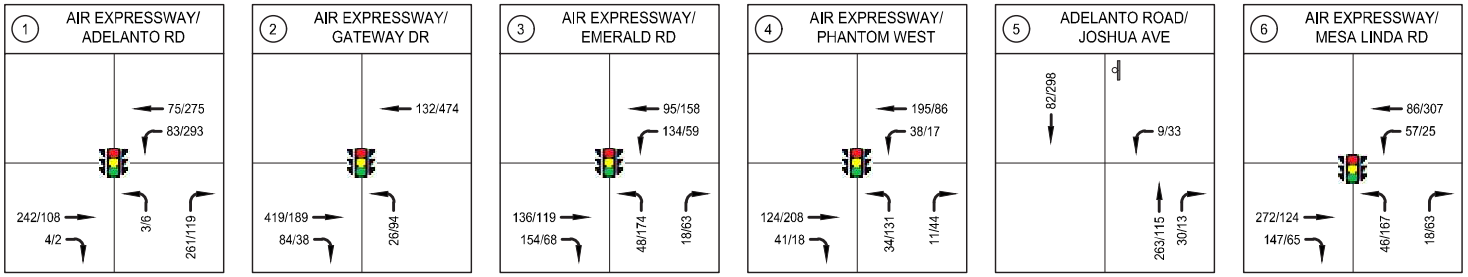
Notes:
KSF = Thousands of Square Feet.
AM / PM Peak Hour of Adjacent Street Traffic = Trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods.
Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition). High-Cube Fulfillment Center Warehouse rates for land use category 155 (Sort).
Source of passenger car / truck mode share (percentage of total): South Coast Air Quality Management District High Cube Warehouse Trip Generation Study (2013-2014). Based on data from Amazon Fulfillment Center in San Bernardino, CA (1,466,263 square feet in size), and FedEx Center in Bloomington, CA (442,000 square feet in size).
Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions

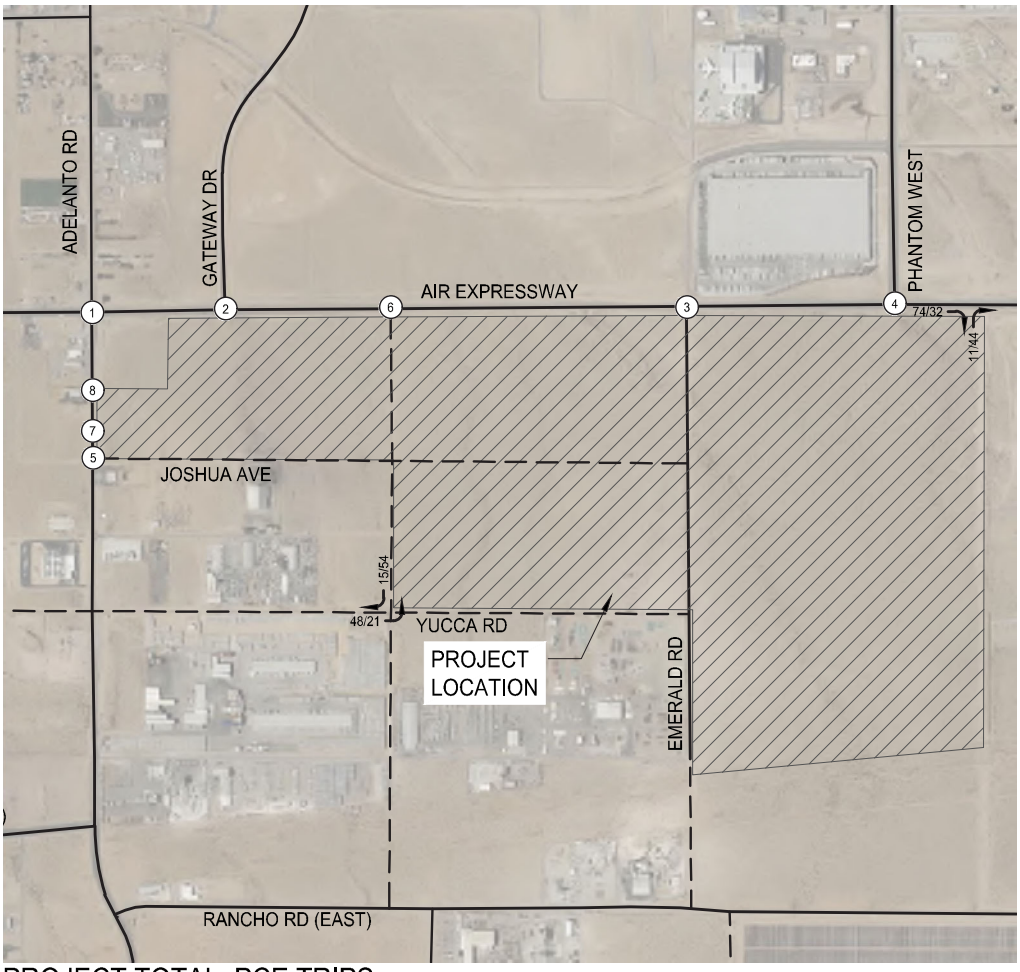
5.2 Project Trip Distribution and Assignment

The distribution of project trips to the surrounding street network is based on assumed origins of the project's employees. For passenger cars, the macro directional distribution patterns (east, west, north, and south) are established by reviewing traffic counts and aerial photography to determine regional concentrations of residential and commercial uses where employees would reside and shop.

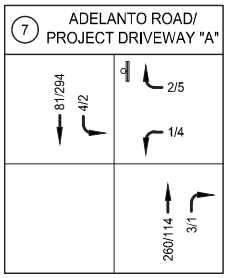
For heavy trucks, distribution is determined by the location of the state highway system and the individual highways that access the region and the various sub-regions. Once the macro distribution pattern has been established, passenger cars are assigned to the surrounding streets that provide the fastest routes on major streets. Similarly, heavy trucks are assigned to fastest designated truck routes to the regional destinations.

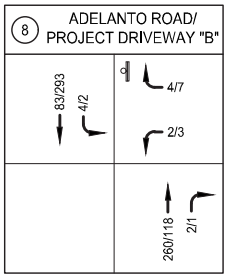
Appendix C illustrate both the directional distribution (percent direction) and the assignment of project traffic (peak hour trips) to the street system. **Figure 6** shows the assignment of the project total to the study intersections.











PROJECT TOTAL PCE TRIPS

AM PEAK PERIOD - 767 IN / 237 OUT
PM PEAK PERIOD - 337 IN / 873 OUT

LEGEND

XX/XX - AM/PM PROJECT TOTAL TRIPS
(#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

FIGURE 6: PROJECT TOTAL PCE TRIPS
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 6.dwg
Last Opened: Jul 17, 2026 - 4:55pm by: Tmm

5.3 Project Specific Off-Site Transportation Improvements

As described in **Section 1.2**, the project will be conditioned to implement the City of Adelanto's standard frontage improvements that might include dedication of right of way and constructing the half-width of the ultimate cross-section of Air Expressway, Adelanto Road and other public streets within or adjacent to the project site. Widening to accommodate left and right-turn lanes described in each section below occurs on the south side of Air Expressway. In addition, the project has proposed implementing access improvements including necessary street widening and traffic control devices at intersections providing access to the site. These "project-specific" off-site improvements are described below.

- Air Expressway at Gateway Drive: Construct the south leg as a full-access driveway, widen to the south along Air Expressway to accommodate turn lanes, and modify the traffic signal to accommodate the new south leg and additional turning lanes. Convert to an 8-phase traffic signal. Note that some of the traffic signal modifications needed to accommodate the new south leg of the intersections will occur in the City of Victorville. For each approach being modified provide the striping configurations described below and consistent with the conceptual striping plans (or as modified in this report) found in **Appendix G**.[1]
  - Northbound: construct and stripe the northbound approach to provide an exclusive left-turn lane and a shared through-right-turn lane. Provide north-south left-turn protected phasing.
  - Southbound: maintain the existing left-turn lane and convert the existing right-turn lane to a shared through-right-turn lane.
  - Eastbound: maintain the existing left-turn lane and two through lanes. Construct an exclusive right-turn lane (approximately 200 ft. in length with a 90-foot taper).
  - Westbound: construct left-turn lane (approximately 300 ft. in length with a 90 ft. taper), maintain existing two through-lanes and existing right-turn lane into Gateway Drive. Provide east-west left-turn protected phasing.
- Air Expressway / Mesa Linda Road: Install a traffic signal, construct the south leg, and widen to the south along Air Expressway to accommodate turn lanes. Note that some of the traffic signal modifications needed to accommodate the new south leg of the intersections will occur in the City of Victorville. For each approach being modified provide the striping configurations described below and consistent with the conceptual striping plans (or as modified in this report) found in **Appendix G**.
  - Northbound: construct a full-access driveway. Provide an exclusive left-turn lane and an exclusive right-turn lane. Provide protected phasing for northbound traffic.
  - Eastbound: maintain the existing two through-lanes and construct an exclusive right-turn lane (approx. 300 ft. in length with a minimum 120-ft. long taper).
  - Westbound: construct an exclusive left-turn lane (approx. 300 ft. in length with a minimum 90-ft. long taper) and maintain the existing two through-lanes. Provide left-turn protected phasing.
- Air Expressway at Emerald Road: Install traffic signal and widen to the south along Air Expressway to accommodate turn lanes. Note that some of the traffic signal modifications needed to accommodate the new south leg of the intersections will occur in the City of Victorville. For each approach being modified provide the striping configurations described below and consistent with the conceptual striping plans (or as modified in this report) found in **Appendix G**.
  - Northbound: construct south leg with curb and gutter (per city standards) with an exclusive left-turn lane and an exclusive right-turn lane. Provide protected phasing for northbound traffic.
  - Eastbound: maintain the existing two through lanes and construct an exclusive right-turn lane (approx. 300 ft. in length with a minimum 120-ft. long taper).
  - Westbound: construct an exclusive left-turn lane (approx. 300 ft. in length with a minimum 90-ft. long taper) and maintain the existing two through-lanes. Provide protected phasing for northbound traffic.

[1] Adelanto Industrial Park. Air Expressway – Conceptual Striping (Between Adelanto Rd and 1000' East of Phantom West). Albert A. Webb Associates. 5/23/2025.

- Adelanto Road / Joshua Avenue: Construct Joshua Avenue and widen Adelanto Road for standard frontage improvements and to accommodate turn lanes. The width of Joshua Avenue is constrained at this intersection because the applicant does not control the land south of Joshua Street's right-of-way. The constraint restricts the width of Joshua Street to one inbound and one outbound lane so that truck turning templates (SB left turn and NB right turn from Adelanto to Joshua) can be accommodated without encroaching into opposing lanes. This intersection should be maintained with side-street stop-control of Joshua Avenue and providing a single lane inbound and a single lane outbound on Joshua Avenue.
  For each approach being modified provide the striping configurations described below and consistent with the conceptual striping plans (or as modified below) found in **Appendix G**.
  - Northbound: stripe a single 24-ft. wide northbound shared through-right lane to allow trucks to swing wide while turning onto Joshua Avenue.
  - Southbound: stripe an exclusive left-turn lane and a single through lane.
  - Westbound: stripe a single shared left-right turn lane.
- Air Expressway / Phantom West: Construct the south leg as a full-access driveway, widen to the south along Air Expressway to accommodate turn lanes, and modify signal to accommodate additional movements consistent with the conceptual striping plans (or as modified below) found in **Appendix G**. Note that some of the traffic signal modifications needed to accommodate the new south leg of the intersections will occur in the City of Victorville.
  - Convert to an 8-phase traffic signal.
  - Northbound: construct driveway and stripe an exclusive left-turn lane and a shared through-right-turn lane. Provide north-south left-turn protected phasing.
  - Southbound: maintain the existing dual left-turn lanes and existing dual right-turn lanes. Provide north-south left-turn protected phasing.
  - Eastbound: maintain the existing left-turn lane and two through-lanes. Construct an exclusive right-turn lane. Provide east-west left-turn protected phasing.
  - Westbound construct an exclusive left-turn lane and maintain the existing two through lanes and exclusive right-turn lane (approx. 300 ft. in length with a minimum 120-ft. long taper). Provide east-west left-turn protected phasing.
- Project Driveway 700 ft. East of Phantom West intersection.
  - Construct the proposed right-turn-in / right-turn-out driveway located approximately 700 ft. east of the south leg of the Air Expressway / Phantom West intersection.
- Construct the driveways accessing Building 1.

5.4 Opening Year 2030 With Project Traffic Analysis

The intersection capacity analysis of opening Year 2030 plus project conditions uses the AM and PM peak hour traffic volumes shown in **Figure 7** and the project intersection geometrics shown in **Figure 8**. **Table 5 2** and **Appendix E** provide the results of the analysis.

As presented in **Table 5-2**, on the following page, in the opening Year 2030 conditions scenario, all the study intersections would operate at LOS C or better during the AM peak hour and PM peak hour except the intersection of Air Expressway / Emerald Rd operates a LOS D during the AM peak hour and LOS F during the PM peak hour as a side-street stop-controlled intersection. As a result, this intersection is identified as a cumulative deficiency occurring prior to the addition of project traffic.

In the opening Year 2030 with project scenario, all the study intersections are anticipated to operate at LOS D or better during the AM peak hour and PM peak hour with the existing geometrics and the proposed project-specific off-site improvements to access intersections.

5.5 Traffic Signal Warrant Analysis

In the opening Year 2030 plus project conditions, only warrant #3 (peak hour volume) is evaluated. Traffic signal warrant worksheets are provided in **Appendix F**.

1. At the intersection of Air Expressway at Emerald Road, the maximum volume from the minor street of Emerald Road is 340 vehicles during the PM peak hour and exceeds the minimum threshold of 75 vehicles. The intersection of Air Expressway at Emerald Road meets the CA MUTCD warrant #3 justifying installation of a traffic signal.

2. At the intersection of Adelanto Road at Joshua Avenue, the maximum volume from the minor street of Joshua Avenue is 33 vehicles during the PM peak hour. This is below the minimum threshold of 75 vehicles.

Table 5-2: Intersection Level of Service Comparison With and Without Project - Opening Year 2030

Intersection	Intersection Control Type	Opening Year 2030 Conditions Without Project [a]				Opening Year 2030 With Project Conditions				Change in Delay (Seconds)		Exceed the Criteria [b]	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM	AM	PM
1. Air Expressway / Adelanto Road	TS	23.5	C	26.4	C	40.9	D	46.3	D	17.4	19.9	NO	NO
2. Air Expressway / Gateway Drive[1]	TS	11.4	B	8.2	A	15.0	B	11.6	B	3.6	3.4	NO	NO
3. Air Expressway / Emerald Road[2]	SSSC / (TS)	27.6	D	50.8	F	31.5	B	24.9	C	3.9	-25.9	NO	NO
4. Air Expressway / Phantom West[5]	TS	36.4	D	29.8	C	41.0	C	30.7	C	4.6	0.9	NO	NO
5. Adelanto Road / Joshua Avenue[3]	(SSSC)	Future Intersection				16.7	D	19.4	C	Not Applicable		NO	NO
6. Air Expressway / Mesa Linda Rd[4]	(TS)	Future Intersection				18.4	B	5.8	A			NO	NO
7. Adelanto Road / Driveway #1[6]	(SSSC)	Future Intersection				14.2	B	13.9	B			NO	NO
8. Adelanto Road / Driveway #2[6]	(SSSC)	Future Intersection				13.8	B	12.5	B			NO	NO

Notes:

[a] Future Year 2046 baseline conditions do not include "project" traffic or project-specific off-site improvements. The "no build" or baseline "without project" analyses in all scenarios always represent conditions without the project.

[b] The criteria used to determine the project's responsibility with respect to a level of service deficiency is (1) if the addition of project traffic causes an intersection's level of service to change from a LOS D or better to a LOS E or F, it is a project-specific deficiency requiring mitigation, and (2) if the project adds any traffic to an intersection operating at a deficient LOS E or LOS F prior to the addition of project traffic, it is cumulative deficiency in which the project may need to contribute its fair share to the cost of mitigation.

Proposed Project-Specific Off-Site Improvements

[1]The implementation of the proposed addition of the full-access drive on the south leg, modification of the traffic signal, and optimizing the signal timing.

[2]The installation of a traffic signal and widening along Air Expressway to accommodate turning lanes.

[3]The installation of side street stop control and extension of Joshua Avenue into the project site.

[4]The installation of a full-access traffic signal and construction of Mesa Linda Road internal to the project site.

[5]The construction of the south leg of the Air Expressway / Phantom West intersection, modification of the traffic signal, and widening of the south side of Air Expressway to accommodate lanes associated with the new south leg.

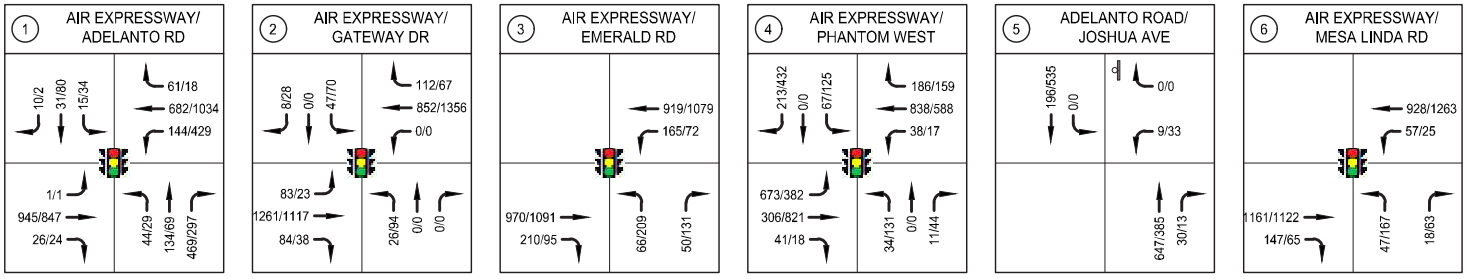
[6]Two project access driveways on Adelanto Road north of the Joshua Avenue intersection.

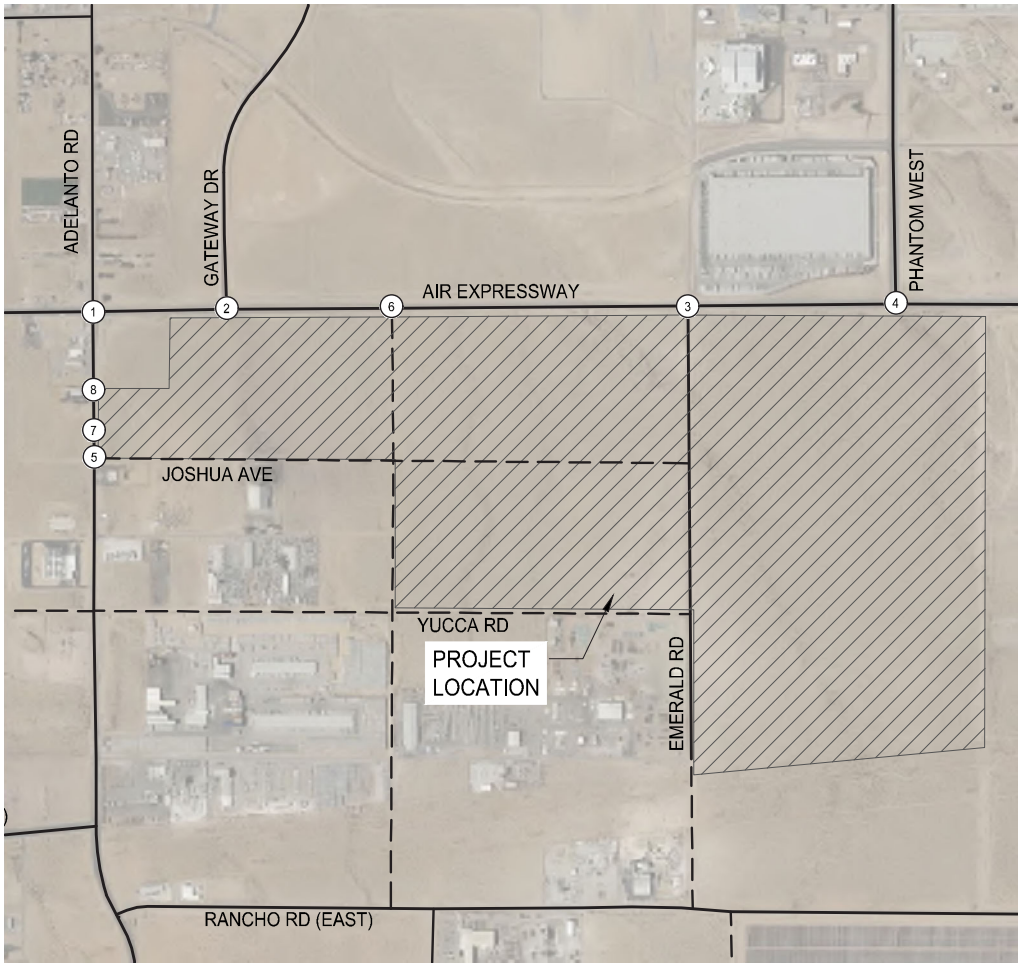
Abbreviations and Definitions:

TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left-turn lane.
Delay – seconds per vehicle, LOS – Level of Service

The intersection of Adelanto Road at Joshua Avenue does not meet the CA MUTCD warrant #3 justifying installation of a traffic signal.

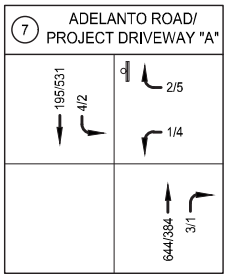
3. At the intersection of Air Expressway at Mesa Linda Road, the maximum volume from the minor street of Mesa Linda Road is 230 vehicles during the PM peak hour and exceeds the minimum threshold of 75 vehicles. The intersection of Air Expressway at Mesa Linda Road meets the CA MUTCD warrant #3 justifying installation of a traffic signal.

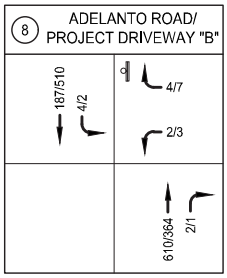




N

NOT TO SCALE





LEGEND

XX/XX - AM/PM PCE TRAFFIC VOLUMES

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

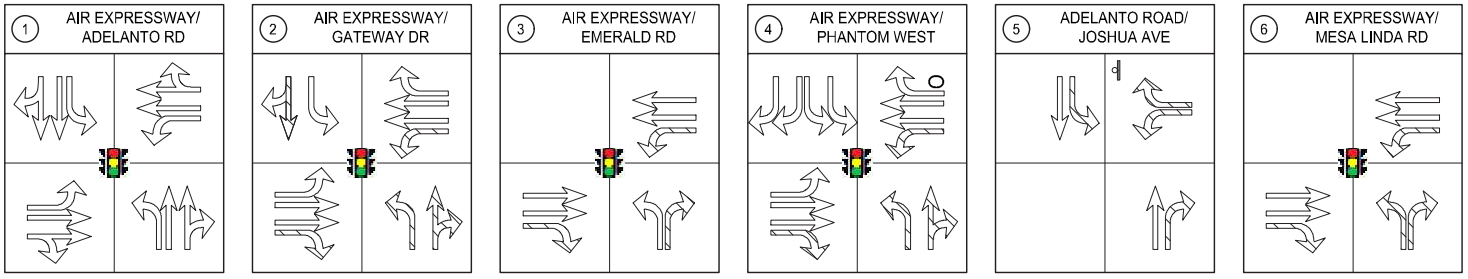
DAVID EVANS AND ASSOCIATES INC.

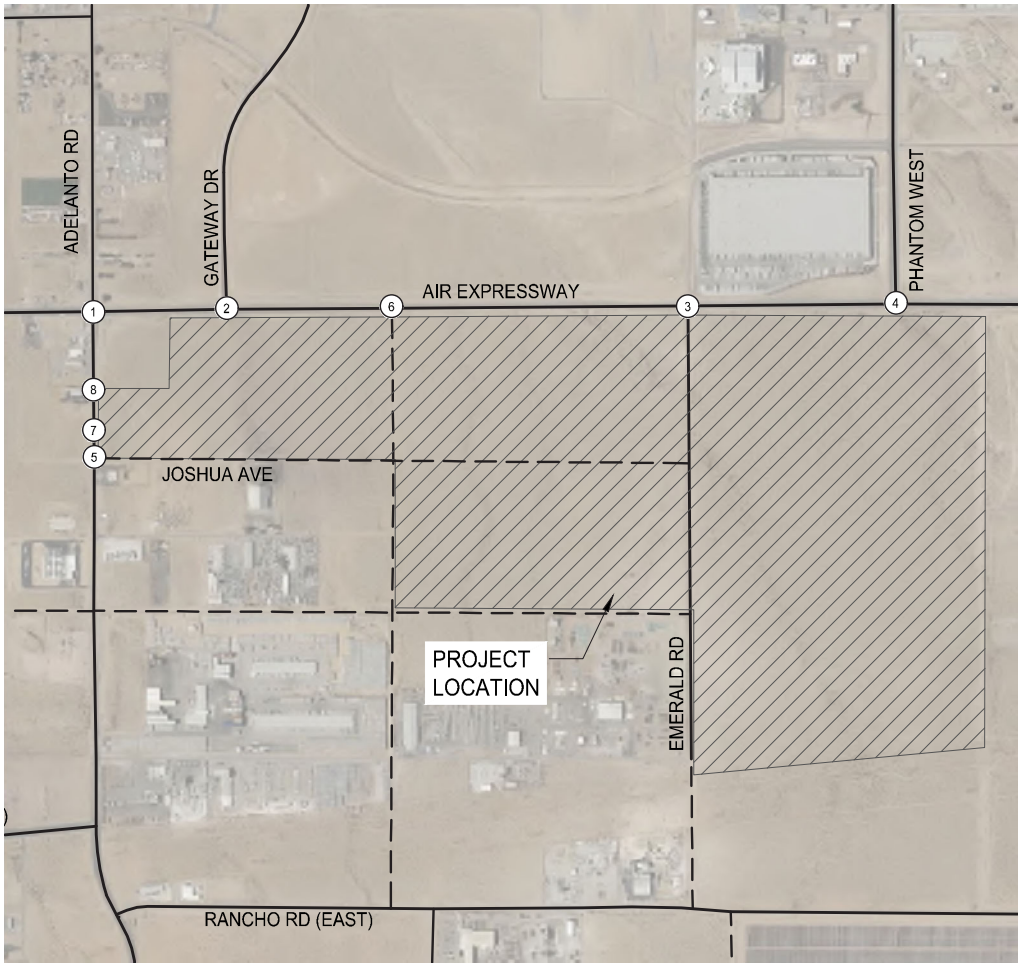
FIGURE 7: OPENING YEAR 2030 PLUS PROJECT PCE TRAFFIC VOLUMES

ADELANTO INDUSTRIAL PARK

ADELANTO, CA

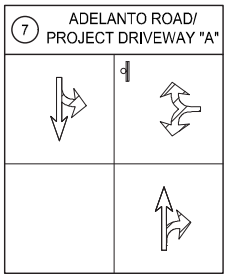
Drawing Name: P:\MMKLT00000001\10400CAD\TIE\XHIBITS\Study\Figure 7.dwg
Last Opened: Jul 17, 2026 - 4:56pm by: Tmm

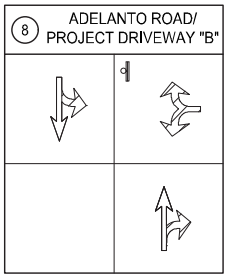




N

NOT TO SCALE





LEGEND

- EXISTING GEOMETRICS
- PROPOSED PROJECT GEOMETRICS
- (#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION
- O - RIGHT TURN OVERLAP PHASING

FIGURE 8: OPENING YEAR 2030 PLUS PROJECT INTERSECTION GEOMETRICS

ADELANTO INDUSTRIAL PARK

ADELANTO, CA

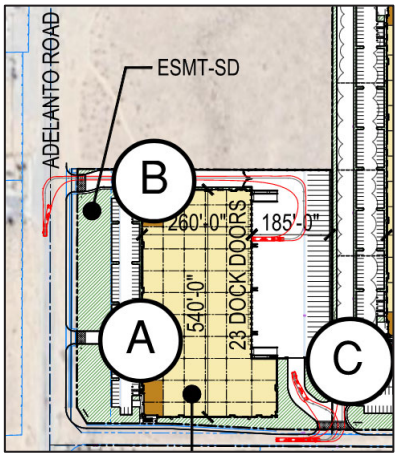
DAVID EVANS AND ASSOCIATES INC.

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 8.dwg
Last Opened: Jul 17, 2026 - 4:57pm by: Tmm

5.6 Site Access

As shown in the site plan (**Figure 2**) the proposed project consists of the construction of seven buildings. Access to the site building 1 is provided by two driveways on Adelanto Road and one driveway on Joshua Avenue. Access to buildings 2, 3 and 4 is provided by three full access driveways on Air Expressway, seven full access driveways on Emerald Road, and three full access driveways on Joshua Avenue. Access to Buildings 5, 6, and 7 is provided by two driveways on Air Expressway and six driveways on Emerald Road.

Site driveways are described below, and the proposed lane geometries are shown previously in **Figure 8.**



Building 1 Driveway Locations

Site Access Provided for Building 1:

Access to the site building 1 is provided by two driveways on Adelanto Road and one driveway on Joshua Avenue.

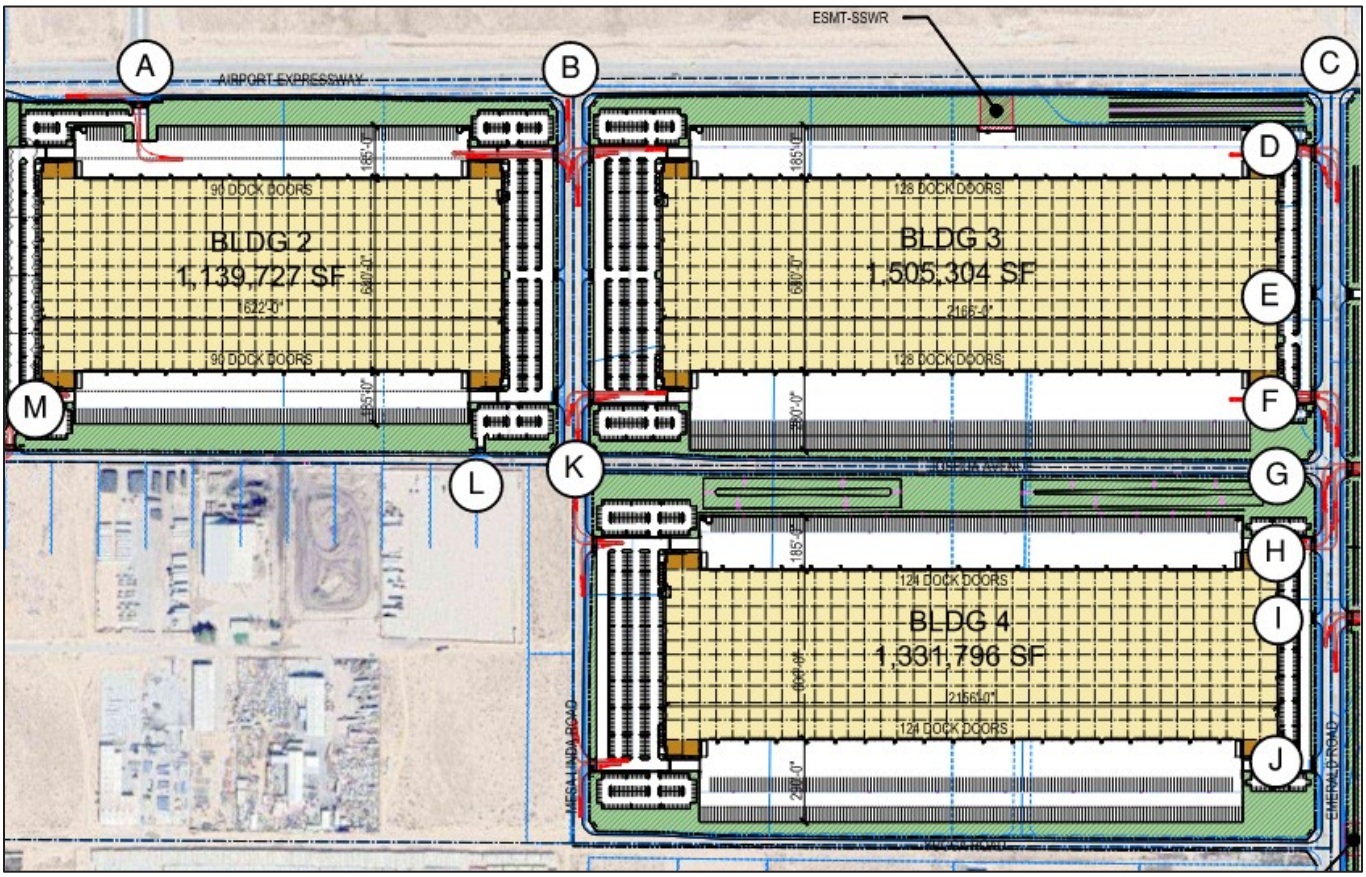
- The two project driveways provided along Adelanto Road include a full-access autos only driveway "A" located approximately 260 feet north of Joshua Avenue (centerline to centerline) and a full-access trucks only driveway "B" located approximately 630 feet north of Joshua Avenue (centerline to centerline).
- The project driveway provided along Joshua Avenue is a full-access driveway "C" located approximately 675 feet east of Joshua Avenue (centerline to centerline).

Site Access Site Access Provided for Buildings 2, 3, and 4:

Access to buildings 2, 3, and 4 is provided by three full access driveways on Air Expressway, seven full access driveways on Emerald Road, and three full access driveways on Joshua Avenue.

Air Expressway, along the project's frontage, is configured with two westbound lanes and two eastbound lanes. The project's proposed improvements would modify the intersections of Air Expressway at Gateway Drive, Air Expressway at Mesa Linda Road, and Air Expressway at Emerald Road.

- The three project driveways provided along Air Expressway include a full-access driveway "A" located on the south leg of Gateway Drive, a full-access driveway "B" located on the south leg of Mesa Linda Road, a full-access driveway "C" located on the south leg of Emerald Road.
- The seven project driveways provided along Emerald Road include a full-access driveway "D" located approximately 280 feet south of Air Expressway (centerline to centerline), a full-access driveway "E" located approximately 780 feet south of Air Expressway (centerline to centerline), a full-access driveway "F" located approximately 1,145 feet south of Air Expressway (centerline to centerline), a full-access driveway "G" located on the west leg of Joshua Avenue, a full-access driveway "H" located approximately 270 feet south of Joshua Avenue (centerline to centerline), a full-access driveway "I" located approximately 530 feet south of Joshua Avenue (centerline to centerline), and a full-access driveway "J" located approximately 1,060 feet south of Joshua Avenue (centerline to centerline).
- The three project driveways provided along Joshua Avenue include a full-access driveway "K" located at the intersection with Mesa Linda Road, a full-access driveway "L" located approximately 330 feet west of Emerald Road (centerline to centerline), and a full-access driveway "M" located approximately 675 feet east of Adelanto Road (centerline to centerline.



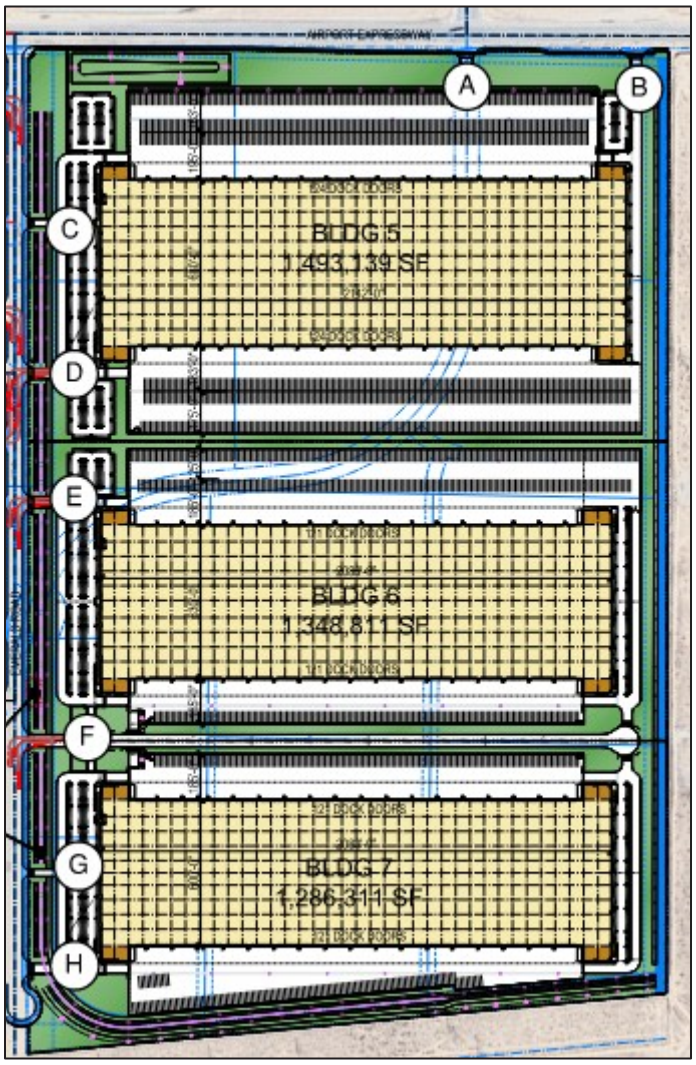
Buildings 2, 3, and 4 Driveway Locations

Site Access Site Access Provided for Buildings 5, 6, and 7:

Access to Buildings 5, 6, and 7 is provided by two driveways on Air Expressway and six driveways on Emerald Road.

Air Expressway, along the project's frontage, is configured with two westbound lanes and two eastbound lanes. Emerald Road is currently an unimproved road within the project area.

- The two project driveways provided along Air Expressway include a full-access driveway "A" located on the new south leg of Phantom West and a full-access driveway "B" located approximately 700 feet east of Air Expressway (centerline to centerline).
- The six project driveways provided along Emerald Road include a full-access driveway "C" located approximately 780 feet south of Air Expressway (centerline to centerline), a full-access driveway "D" located on the east leg of Joshua Avenue, a full-access driveway "E" located approximately 540 feet south of Joshua Avenue (centerline to centerline), a full-access driveway "F" approximately 1,510 feet south of Joshua Avenue (centerline to centerline), a full-access driveway "G" located approximately 2,050 feet south of Joshua Avenue (centerline to centerline), and a full-access driveway "H" located approximately 2,450 feet south of Joshua Avenue (centerline to centerline).



Buildings 5, 6, and 7 Driveway Locations

6 FUTURE YEAR 2046 CONDITIONS WITHOUT PROJECT

The Year 2046 future conditions without project scenario represent ambient growth in traffic up to the Year 2046. Ambient growth was derived from forecasts from the San Bernardino County Transportation Analysis Model (SBTAM). Year 2046 intersection movements were developed from post processing forecasted approach and departure volumes and balancing the turn movement volumes for each study intersection. The SBTAM traffic model plots are provided in **Appendix D.**

The future Year 2046 conditions scenario evaluates impacts due to ambient growth in traffic within the study area up to the Year 2046 when project construction is expected to be completed.

6.1 Future Year 2046 Conditions Traffic Analysis

The future conditions intersection capacity analysis uses existing intersection geometrics and the projected AM and PM peak hour traffic shown in **Figure 9**. **Table 6-1** and **Appendix E** provide the results of the analysis.

Table 6-1: Intersection Capacity Analysis –Future Year 2046 Without Project Conditions

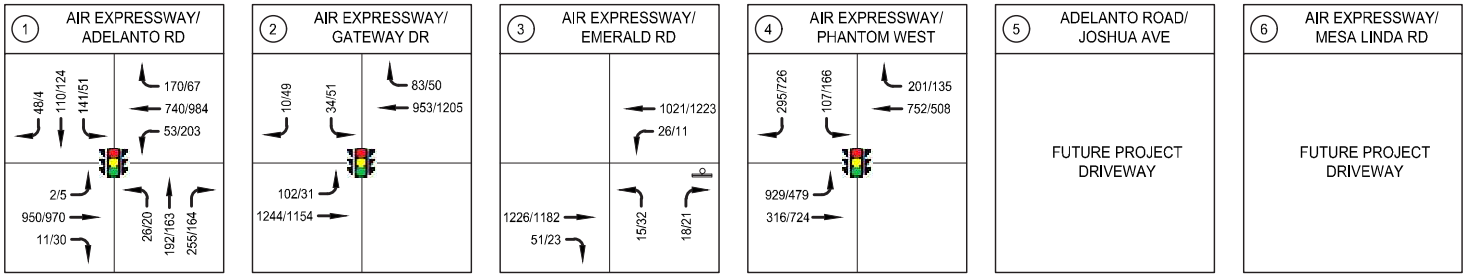
Intersection	Intersection Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Air Expressway / Adelanto Road	TS	55.3	E	55.8	E
2. Air Expressway / Gateway Drive	TS	10.9	B	10.8	B
3. Air Expressway / Emerald Road	SSSC	58.3	F	108.4	F
4. Air Expressway / Phantom West	TS	75.6	E	52.6	D
5. Adelanto Road / Joshua Avenue	(SSSC)	Future Intersection			
6. Air Expressway / Mesa Linda Road	(TS)	Future Intersection			
7. Adelanto Road / Driveway #1	(SSSC)	Future Intersection			
8. Adelanto Road / Driveway #2	(SSSC)	Future Intersection			
Abbreviations and Definitions: TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left-turn lane Delay – seconds per vehicle, LOS – Level of Service					

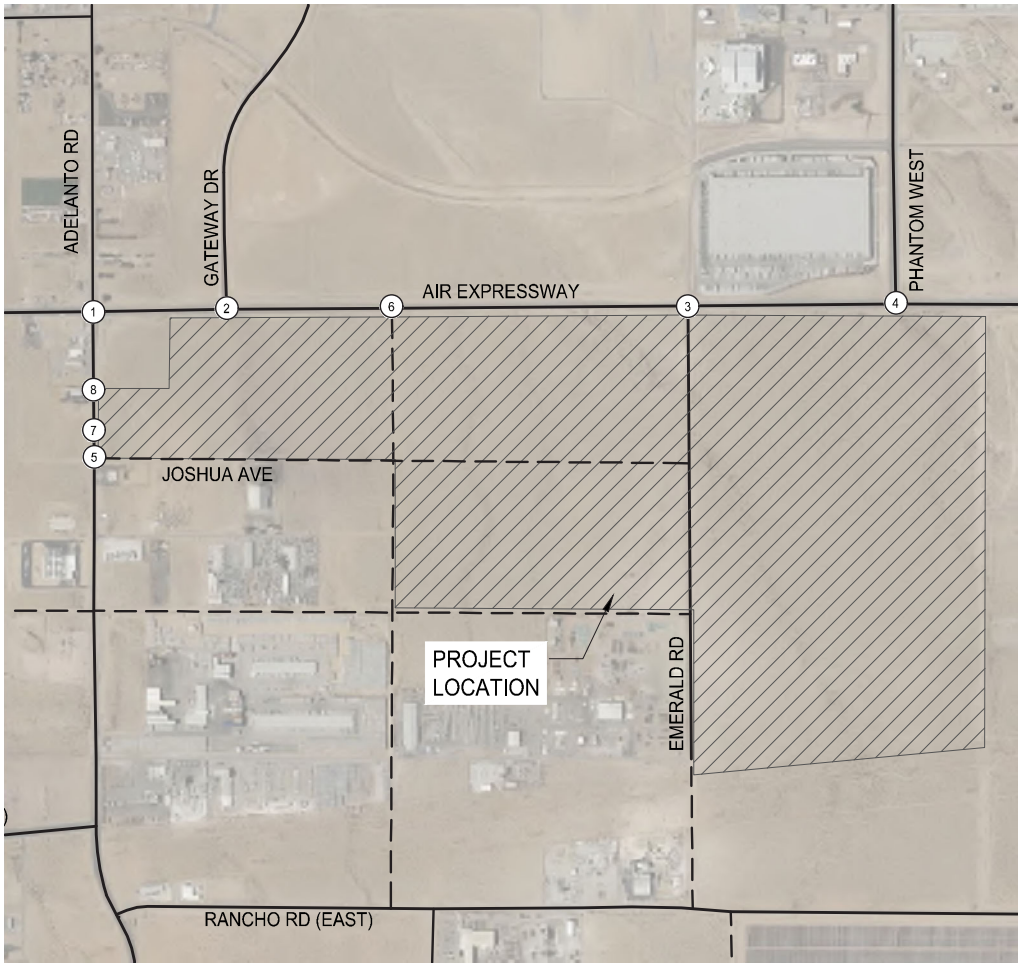
As presented in **Table 6-1***,* under future Year 2046 conditions, the intersection of Air Expressway / Adelanto Road is anticipated to operate at LOS E during the AM peak hour and the PM peak hour, the intersection of Air Expressway / Emerald Road is anticipated to operate at LOS F during the AM peak hour and the PM peak hour, and the intersection of Air Expressway / Phantom West is anticipated to operate at LOS E during the AM peak hour and LOS D in the PM peak hour. As a result, this intersection is identified as cumulative deficiencies occurring prior to the addition of project traffic.

6.2 Traffic Signal Warrant Analysis

In the future Year 2046 conditions, only warrant #3 (peak hour volume) is evaluated. Traffic Signal Worksheets are provided in **Appendix F**.

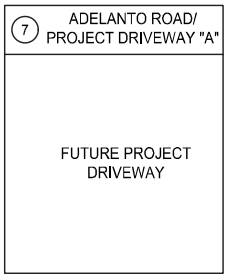
At the intersection of Air Expressway at Emerald Road, the maximum volume from the minor street of Emerald Road is 53 vehicles during the PM peak hour. This is below the minimum threshold of 75 vehicles, and as such does not meet the CA MUTCD warrant #3 justifying installation of a traffic signal.

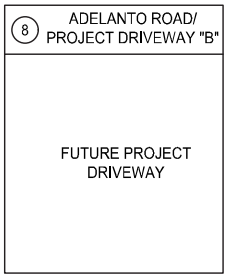




N

NOT TO SCALE





LEGEND

XX/XX - AM/PM PCE TRAFFIC VOLUMES

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

FIGURE 9: FUTURE YEAR 2046 PCE TRAFFIC VOLUMES ADELANTO INDUSTRIAL PARK ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 9.dwg
Last Opened: Jul 17, 2026 - 4:58pm by: Tinn

7 FUTURE YEAR 2046 WITH PROJECT CONDITIONS

The future Year 2046 plus project conditions scenario adds the project's estimated traffic generation to the Year 2046 conditions scenario. As described in the previous section, the forecasted Year 2046 future conditions intersection turning movements were derived from interpolating and post processing year 2050 approach and departure volumes and balancing the turn movement volumes for each study intersection. The SBTAM traffic model plots are provided in **Appendix D.**

7.1 Future 2046 With Project Traffic Analysis

The intersection capacity analysis of future year 2046 plus project conditions uses the projected AM and PM peak hour traffic volumes shown in **Figure 10** and the geometrics shown in **Figure 11**. **Table 7-1** and **Appendix E** provide the results of the analysis.

Table 7-1: Intersection Level of Service Comparison With and Without Project - Future Year 2046

Intersection	Control Type	Future Year 2046 Without Project Conditions [a]				Future Year 2046 With Project Conditions				Change in Delay (Seconds)		Exceed the Criteria [b]	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM	AM	PM
1. Air Expressway / Adelanto Road[0]	TS	55.3	E	55.8	E	56.0	E	68.3	E	0.7	8.4	YES	YES
Mitigation: widen NB approach to include a new right turn lane (land acquisition required), implement NB right turn overlap phasing, and optimize signal timing		Not Applicable				41.1	D	48.5	D	-14.2	-11.4	NO	NO
2. Air Expressway / Gateway Drive[1]	TS	11.7	B	10.8	B	18.5	B	11.7	B	7.6	3.2	NO	NO
3. Air Expressway / Emerald Road[2]	SSSC / (TS)	58.3	F	108.4	F	39.8	D	27.0	C	-18.5	-81.4	NO	NO
4. Air Expressway / Phantom West[5]	TS	75.6	E	52.6	D	63.1	E	32.9	C	-12.5	-19.7	YES	NO
Mitigation: none	TS	No feasible measures beyond the project-specific off-site improvements to improve LOS deficiency in the AM peak hour											
5. Adelanto Road / Joshua Avenue[3]	(SSSC)	Future Intersection				19.1	C	21.9	C	Not Applicable		NO	NO
6. Air Expressway / Mesa Linda Road[4]	(TS)	Future Intersection				18.1	B	7.4	A			NO	NO
7. Adelanto Road / Driveway #1[6]	(SSSC)	Future Intersection				15.8	C	16.3	C			NO	NO
8. Adelanto Road / Driveway #2[6]	(SSSC)	Future Intersection				16.0	C	14.7	B			NO	NO

Notes:

[a] Future Year 2046 baseline conditions do not include "project" traffic or project-specific off-site improvements. The "no build" or baseline "without project" analyses in all scenarios always represent conditions without the project.

[b] The criteria used to determine the project's responsibility with respect to a level of service deficiency is (1) if the addition of project traffic causes an intersection's level of service to change from a LOS D or better to a LOS E or F, it is a project-specific deficiency requiring mitigation, and (2) if the project adds any traffic to an intersection operating at a deficient LOS E or LOS F prior to the addition of project traffic, it is cumulative deficiency in which the project may need to contribute its fair share to the cost of mitigation.

Proposed Project-Specific Off-Site Improvements

[0]There are no project-specific off-site improvements at this intersection.

[1]The implementation of the proposed addition of the full-access drive on the south leg, modification of the traffic signal, and optimizing the signal timing.

[2]The installation of a traffic signal and widening along Air Expressway to accommodate turning lanes.

[3]The installation of side street stop control and extension of Joshua Avenue into the project site.

[4]The installation of a full-access traffic signal and construction of Mesa Linda Road internal to the project site.

[5]The construction of the south leg of the Air Expressway / Phantom West intersection, modification of the traffic signal, and widening of the south side of Air Expressway to accommodate lanes associated with the new south leg.

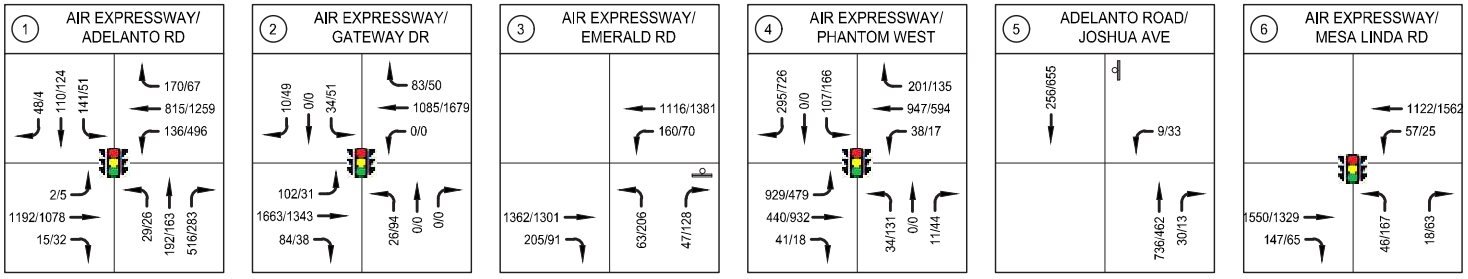
[6]Two project access driveways on Adelanto Road north of the Joshua Avenue intersection.

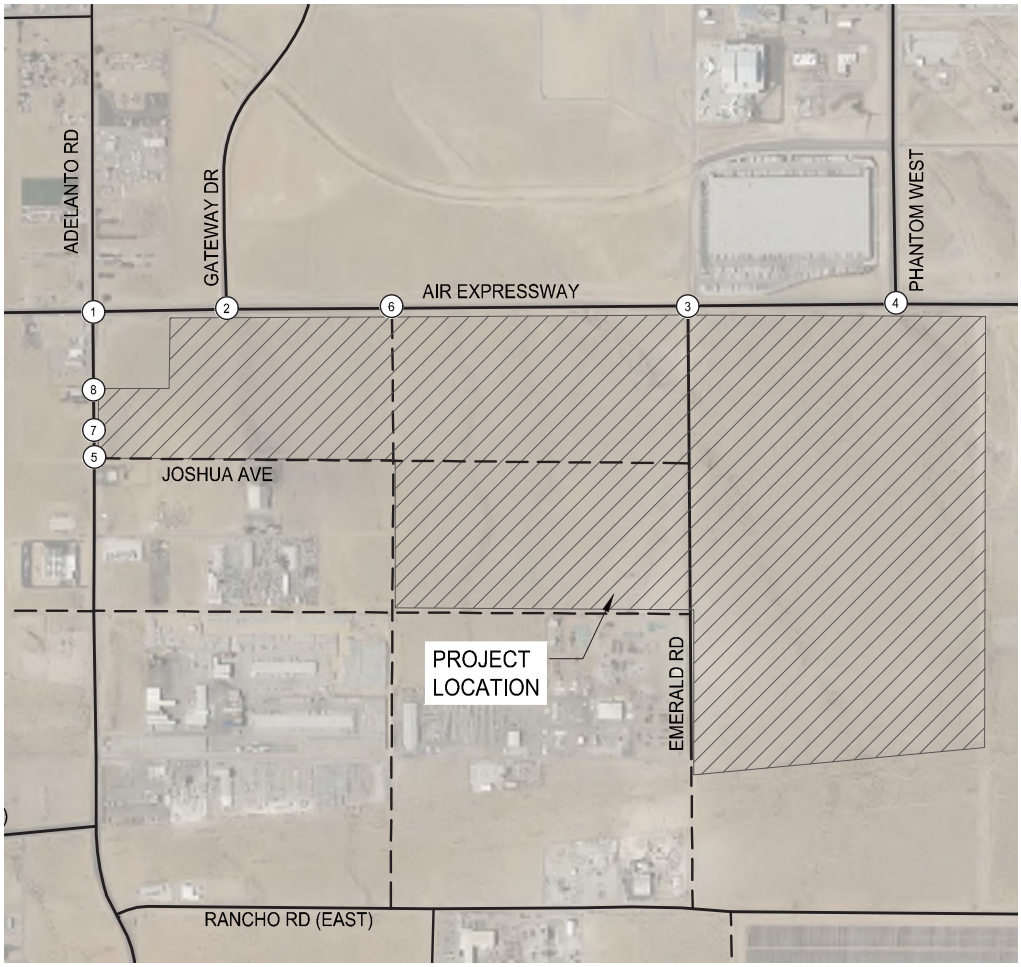
Abbreviations and Definitions:

TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left turn lane.

Delay – seconds per vehicle, LOS – Level of Service

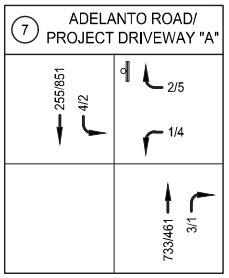
As presented in **Table 7-1**, under future Year 2046 without project conditions, the intersection of Air Expressway / Adelanto Road is anticipated to operate at LOS E during the AM peak hour and the PM peak hour, the intersection of Air Expressway / Emerald Road is anticipated to operate at LOS F during the AM peak hour and the PM peak hour, and the intersection of Air Expressway / Phantom West is anticipated to operate at LOS E during the AM peak hour and LOS D in the PM peak hour. As a result, this intersection is identified as cumulative deficiencies occurring prior to the addition of project traffic. See Section 9.5 below for a detailed discussion of the mitigation measures.

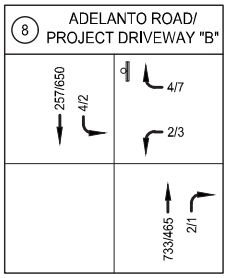




N

NOT TO SCALE





LEGEND

XX/XX - AM/PM PCE TRAFFIC VOLUMES

(#) - STUDY INTERSECTIONS

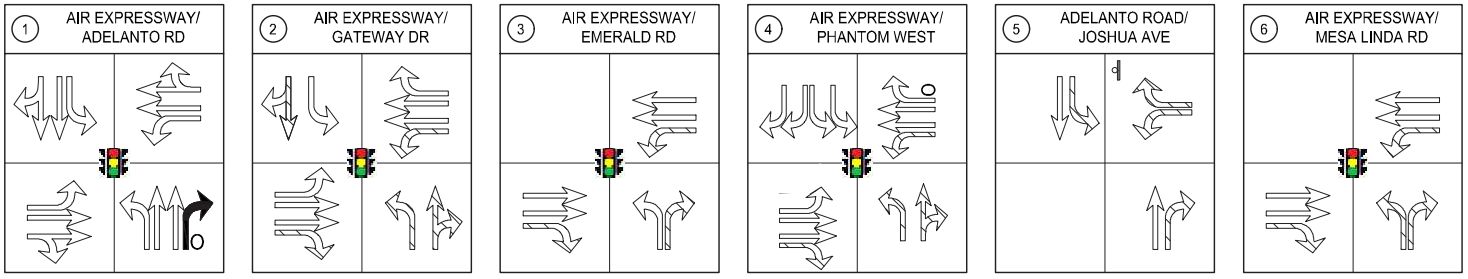
- STOP CONTROLLED INTERSECTION

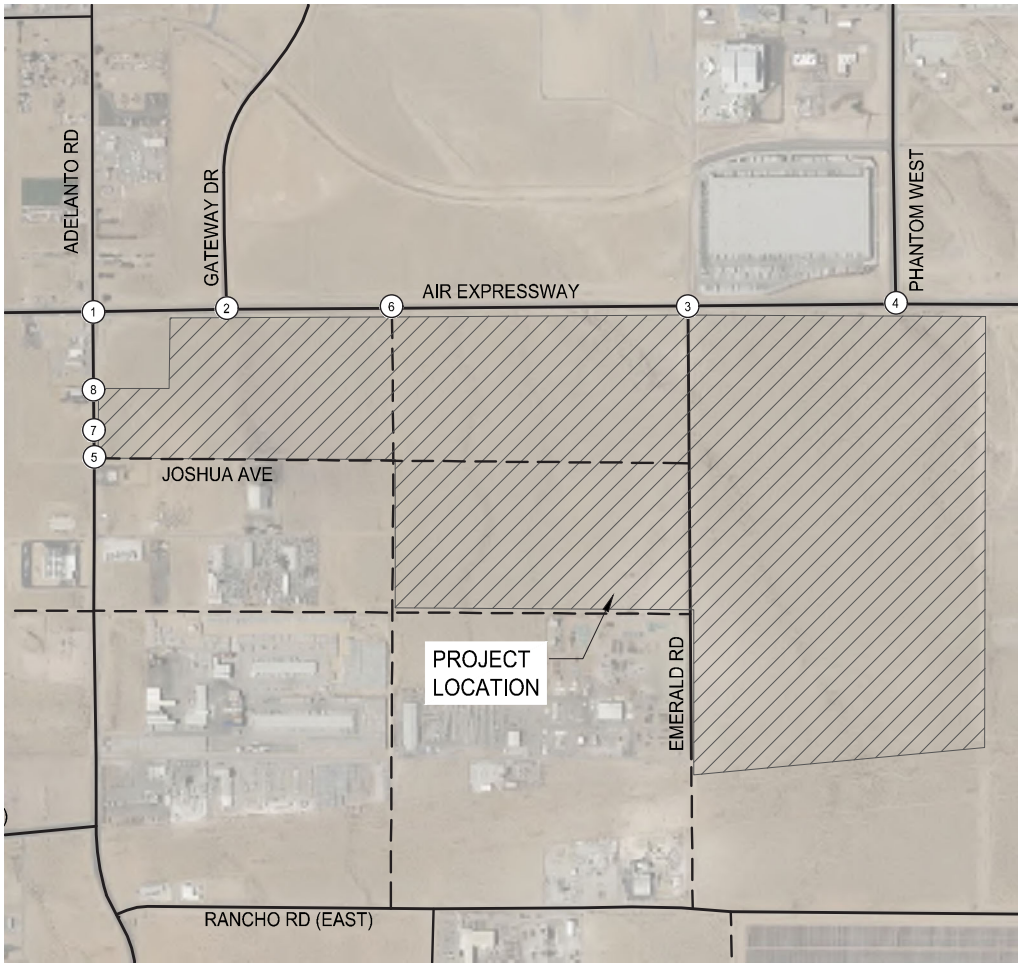
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

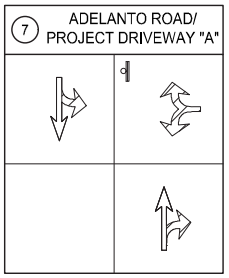
FIGURE 10: FUTURE YEAR 2046 PLUS PROJECT PCE TRAFFIC VOLUMES ADELANTO INDUSTRIAL PARK ADELANTO, CA

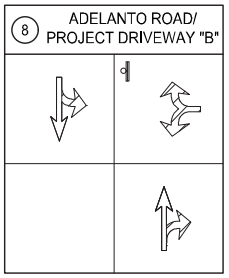
Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Study\Figure 10.dwg
Last Opened: Jul 17, 2026 - 4:58pm by: Tmm











LEGEND

- EXISTING GEOMETRICS
- PROPOSED PROJECT GEOMETRICS
- CUMULATIVE GEOMETRICS
- (#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION
- O - RIGHT TURN OVERLAP PHASING

DAVID EVANS AND ASSOCIATES INC.

FIGURE 11: FUTURE YEAR 2046 PLUS PROJECT INTERSECTION GEOMETRICS ADELANTO INDUSTRIAL PARK ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04400CAD\TIE\EXHIBITS\Study\Figure 11.dwg
Last Opened: Jul 17, 2026 - 4:59pm by: Tinn

In the future with project conditions, the study intersection of Air Expressway / Adelanto Road is anticipated to operate at LOS E during the AM peak hour and the PM peak hour and the intersection of Air Expressway / Phantom West is anticipated to operate at LOS E during the AM peak hour and LOS C in the PM peak hour.

7.2 Traffic Signal Warrant Analysis

In the future Year 2046 plus project conditions scenario, only warrant #3 (peak hour volume) is evaluated. Traffic Signal Worksheets are provided in **Appendix F**.

1. At the intersection of Air Expressway at Emerald Road, the maximum volume from the minor street of Emerald Road is 334 vehicles during the PM peak hour and exceeds the minimum threshold of 75 vehicles. The intersection of Air Expressway at Emerald Road meets the CA MUTCD warrant #3 justifying installation of a traffic signal.
2. At the intersection of Adelanto Road at Joshua Avenue, the maximum volume from the minor street of Joshua Avenue is 33 vehicles during the PM peak hour. This is below the minimum threshold of 75 vehicles. The intersection of Adelanto Road at Joshua Avenue does not meet the CA MUTCD warrant #3 justifying installation of a traffic signal.
3. At the intersection of Air Expressway at Mesa Linda Road, the maximum volume from the minor street of Mesa Linda Road is 230 vehicles during the PM peak hour and exceeds the minimum threshold of 75 vehicles. The intersection of Air Expressway at Mesa Linda Road meets the CA MUTCD warrant #3 justifying installation of a traffic signal.

7.3 Future Year 2046 Conditions – LOS Deficiency Mitigation

At buildout of the project in the future year 2046 scenario, two intersections require additional capacity to improve deficient levels of service. These intersections include Air Expressway at Adelanto Road (operates at LOS E in both peak hours with or without the addition of project traffic) and Air Expressway at Phantom West (operates at LOS E in the AM peak hour). The project does not cause these deficiencies but does contribute to them and the city may require the project to contribute its fair-share to the cost of mitigating the deficiencies.

1. Air Expressway at Adelanto Road: construct an exclusive northbound right-turn lane with right turn overlap phasing and optimize signal timing[2].

   Mitigating the LOS deficiency at the intersection of Air Expressway at Adelanto Road includes installing an exclusive northbound right-turn lane with right-turn overlap phasing resulting in LOS D in both peak hours. Currently, the northbound approach of Adelanto Road at Air Expressway operates with an exclusive left turn lane, a through lane, and a shared through-right lane.

   Widening the northbound approach to maintain two through lanes and an additional right turn lane so that right turn overlap phasing can be implemented improves the level of service in 2046 with the project to a LOS D in both peak periods (as shown in **Table 7-2**). This mitigation requires land acquisition prior to building out of the project or dedication of the necessary right-of-way if the property on the NE corner of the intersection develops.

   Adelanto may consider an interim measure that avoids having to acquire land. There is justification for converting the shared through-right lane to an exclusive right turn lane even on an interim basis until right of way is dedicated or acquired to allow widening of Adelanto Road to its General Plan buildout width as a major 4-lane facility. The northbound right turn volume is higher than the northbound through volume in all analysis scenarios analyzed in this study. The volume of right turns exceeding the through volume ranges from 61 (existing) to 324 (2046 + Project) in the AM peak and from 90 (existing) to 120 (2046 + Project) in the PM peak hour. Converting one northbound through lane to an exclusive right turn

[2] The existing width of the northbound approach of Adelanto Road (measured from centerline of the left-turn lane to the outside curb face is approximately 45 ft. which could accommodate a left, a through, and a right turn lane under Adelanto Road's current two lane cross-section. However, Adelanto Road's ultimate configuration is a four-lane cross-section and will require land acquisition or dedication to accommodate turning lanes and to implement this mitigation measure.

lane would change the northbound through volume to capacity ratio from 0.21 to 0.42 and likely maintain LOS D.

Table 7-2: Intersection Capacity Analysis – Future 2046 With Project Mitigation Measures

Intersection	Control Type	Future Conditions Without Project				Future Conditions With Project				Change in Delay (Seconds)		Exceed the Criteria [a]	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM	PM	AM	PM
1. Air Expressway / Adelanto Road	TS	55.3	E	59.9	E	56.0	E	68.3	E	0.7	8.4	YES	YES
Improvements: widen NB approach to include a new right turn lane (land acquisition required), implement NB right turn overlap phasing, and optimize signal timing	TS	Not Applicable				41.1	D	48.5	D	-14.2	-11.4	NO	NO
4. Air Expressway / Phantom West	TS	75.6	E	52.6	D	63.1	E	32.9	C	-12.5	-19.7	YES	NO
No Feasible Mitigation		Not Applicable				No Feasible Mitigation Measures							

Notes:
[a] The criteria used to determine the project's responsibility with respect to a level of service deficiency is (1) if the addition of project traffic causes an intersection's level of service to change from a LOS D or better to a LOS E or F, it is a project-specific deficiency requiring mitigation, and (2) if the project adds any traffic to an intersection operating at a deficient LOS E or LOS F prior to the addition of project traffic, it is cumulative deficiency in which the project may need to contribute its fair share to the cost of mitigation.
Abbreviations and Definitions:
TS – Traffic signal-controlled intersection, SSSC – Side-street stop-controlled intersection, TWLTL – Two way left turn lane.
Delay – seconds per vehicle, LOS – Level of Service

2. Air Expressway at Phantom West: a close evaluation of this intersection indicates the need for a second eastbound left turn lane given the projected left turn volume in 2046 exceeds 900 vehicles in the AM peak hour (there are currently 556 eastbound left turns in the AM peak hour). The volume to capacity ratio of the left turn will increase from 0.68 (existing AM) to 0.79 (future 2046 AM) to 0.98 (future 2046 + project AM). However, this improvement will require land acquisition or dedication on the north and south side of Air Expressway. Land dedication or acquisition on the north side of Air Expressway won't occur until development of the vacant property in the northwest corner of the intersection. If the widening and required transitions were implemented only on the south side of Air Expressway, the road's cross-section would be asymmetrical and make it difficult to implement dual left turn lanes in the opposite direction should they be required in the future.

   This study finds that implementation of the second eastbound left turn lane to be infeasible currently. Other alternative measures were explored but did not resolve the level of service deficit.

7.4 Future Year 2046 Conditions – Fair-Share Calculations

Table 7-3 presents the calculation of the project's fair-share contribution to the intersections requiring mitigation under project buildout conditions in the future 2046 scenario, where feasible.

Table 7-3: Fair-Share Percentages - Project Buildout in Future 2046 Conditions

Intersection	Existing		Future Year 2046 Without Project		Project (Buildout)		Future 2046 With Project		Fair-Share (%)	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Adelanto Rd / Air Expressway	1565	1703	2,698	2,785	668	803	3366	3588	37%	43%
Air Expressway / Phantom West	1622	1829	2,600	2,738	443	504	3043	3242	31%	36%

Notes:
The fair-share percentage is calculated using the following formula: FS% = Project Buildout Vol / [Fut. 2046+Proj – Existing

8 APPENDICES

Appendix A**:** Approved Traffic Scope
Appendix B: Traffic Counts
Appendix C: Project Trip Distribution and Assignment Figures
Appendix D: Forecast Model Volume Development
Appendix E: Intersection Capacity Analysis
Appendix F: Traffic Signal Warrant Analysis
Appendix G: Conceptual Geometric Plans

DAVID EVANS AND ASSOCIATES INC.

Appendix A: Approved Traffic Scope

SOME ASPECTS OF THIS SCOPE AGREEMENT HAVE BEEN SUPERCEDED BY CHANGES MADE BY THE APPLICANT OR THE CITY OF ADELANTO

DAVID EVANS AND ASSOCIATES INC.

July 17,2024 Job No. MKLT0000-0001

MEMORANDUM



To: Mileski Living Trust
C/O Jessica Haughton, Synergy Consulting CA
1971 W. 190th Street Ste 100
Torrance, CA 90504

From: James Daisa, PE
Senior Transportation Project Manager

RE: TRAFFIC IMPACT STUDY SCOPING AGREEMENT – PROPOSED ADELANTO INDUSTRIAL PARK LOCATED AT SEC OF ADELANTO ROAD AND AIR EXPRESSWAY, IN ADELANTO, CALIFORNIA

This memorandum presents key elements of the proposed Focused Traffic Impact Study Report (TIS Report) scope of work for the above referenced development project. The purpose of this memorandum is to inform the City of Adelanto of our assumptions and methodologies prior to preparing the traffic study. Upon completion of the city's review, we will incorporate any changes specified by the city, and once approved, this document will serve as our notification to proceed.

In addition to the information provided below and attached exhibits, the city's standard Project Traffic Analysis Scoping Form, consistent with City of Adelanto Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment, is included with this memorandum (see **Attachment 1**).

In 2009, the City of Adelanto approved the Environmental Impact Report for the Adelanto Gateway Logistics Center on the project site. Since the approval of the environmental document and, subsequently, the previous development proposal, the owners have revised the site plan. This focused traffic study is intended to address the changes in the site plan and changes to the city's General Plan circulation plan that have occurred since the project was approved in 2009.

A. Project Description

The proposed project consists of seven warehouse buildings on 456.73 acres in the City of Adelanto. The proposed project is located south of Air Expressway and east of Adelanto Road, as illustrated in **Exhibit A**. The buildings range in size from about 199,000 gross square feet of floor area to about 1,585,000 gross square feet totaling nearly 8,600,000 square feet of warehousing, an increase from the approximately 6,935,000 square feet in the approved project. The development site is bounded to the north by Air Expressway, to the south by warehouses and Powerline Road, to the west by warehouses and Adelanto Road, to the east by unimproved Cobalt Road and City of Adelanto city limit. **Exhibit B** shows the proposed site plan.

Project Access

The project's individual buildings are accessed from the city streets bounding the project either directly from driveways or from new streets extending into the site which form an internal circulation system. Most of the buildings are accessed from driveways connecting to the internal circulation system. The internal circulation system is comprised of two primary north-south streets accessed from Air Expressway (Emerald Road and Mesa Linda Road) and two east-west streets accessed from Adelanto Road (Joshua Avenue and Yucca Road). There is no access proposed to the site from Rancho Road to the south despite the existence of an unimproved, but paved, Emerald Road currently connecting Air Expressway to Rancho Road.

Internal Circulation and Access Restrictions

The site plan for the previously approved project identified three major right of way alignments / easements which divided the site: (1) an approximately 340 foot wide potential easement in the northwest quadrant of the site for the High Desert Corridor (HDC) freeway, (2) a 100 foot wide General Plan alignment for Emerald Road beginning at Rancho Road and curving to the northeast to connect to Phantom West at Air Expressway where a HDC interchange was proposed, and (3) an existing 500+ foot wide corridor owned by the Los Angeles Department of Water and Power (DWP) in the southeast quadrant of the site which contains high tension power lines.

Changes with respect to the alignments / easements within the project site that have occurred since the approval of the Adelanto Gateway Logistics Center include:

- The High Desert Corridor freeway concept has been supplanted by a high-speed rail concept that would parallel Air Expressway and require substantially less right to way. The current site plan does not identify an easement for the HDC.
- With the vision for the HDC changing from a freeway concept to a high-speed rail concept, the proposed interchange at Phantom West is unnecessary and the General Plan alignment for Emerald Road is no longer required to connect to Phantom West. The General Plan circulation plan is being updated to remove this alignment.
- Future easements to extend Emerald Road and Mesa Linda Road between Rancho Road and Air Expressway would need to cross the Los Angeles DWP-owned land, but the authority indicates there is inadequate overhead height and resolving this issue may be cost-prohibitive. The current site plan, therefore, terminates Emerald Road and Mesa Linda Road at the project's property lines without connecting to Rancho Road.

  Note that the project does not propose a General Plan Amendment to realign or abandon the current Emerald Road alignment—an amendment to change the alignment of Emerald Road is an ongoing or upcoming city effort.

Building Access

The project's warehouse buildings are oriented with long sides in the east-west direction. The buildings are accessed from their narrow ends where employee and guest parking lots are located as well as the gated entries for trucks accessing the secure loading dock and trailer parking areas.

As shown in **Exhibit B**, Building 1 gains access from driveways on Adelanto Road and Joshua Avenue. Building 2 gains access from driveways on Air Expressway, Mesa Linda Road, and Joshua Avenue. Building 3 gains access from driveways on Air Expressway, Mesa Linda Road, Joshua Avenue, and Emerald Road. Building 4 gains access from driveways on Mesa Linda Road, Joshua Avenue, Yucca Road, and Emerald Road. Building 5 gains access from driveways on Air Expressway and Emerald Road. Building 6 gains access from driveways on Emerald Road and, finally, Building 7 gains access from driveways on Emerald Road.

Currently, the project's proposed access roads of Mesa Linda Road, Joshua Avenue, and Yucca Road are unimproved and unpaved roads that will require constructing part or full improvements concurrently with the project depending on whether the project has fronting development on one, both, or neither side of these streets. Adelanto's General Plan Circulation Plan (January 2023) designates Mesa Linda Road as a collector street, Joshua Avenue as a local street, and Yucca Road as Town Center Loop. Required land dedication and level of street improvements will be identified in the traffic impact study.

B. Project Trip Generation

The proposed project consists of the construction of 8,599,962 gross square feet of warehouse in seven buildings as described below:

- Building 1: 198,891 GSF
- Building 2: 1,155,728 GSF
- Building 3: 1,513,304 GSF
- Building 4: 1, 339,236 GSF
- Building 5: 1,584,820 GSF
- Building 6: 1,437,431 GSF

- Building 7: 1,370,552 GSF

The Institute of Transportation Engineers (ITE) publishes traffic generation data for six different warehousing categories differentiated by type of operations with a wide range of rates between categories[1]. However, the type of warehouse operation is unknown at this stage of planning, therefore, the objective of the traffic analysis is to analyze the traffic generated by a range of warehouse types with different operational characteristics. Trip generation is estimated by aggregating all the buildings and applying an average trip generation rate weighted by the likelihood of occupation by each category and excluding categories that cannot occupy the buildings by design. The ITE categories of High-Cube Fulfillment Center Warehouse (Sort) (ITE land use code 155) and High-Cube Cold Storage Warehouse (ITE land use code 157) are excluded from the weighted averaging of trip generation rates.

Table 1 presents the calculation of the AM and PM peak hour weighted average trip generation rate for the four possible warehouse types that could occupy the project buildings.

Table 1: Weighted Average Trip Generation Rate for Proposed Project

Warehouse Category	ITE LU Code	Weight	AM Peak Hour Rate	Weighted Average AM Rate	PM Peak Hour Rate	Weighted Average PM Rate
General Warehouse	150	27%	0.17	0.05	0.18	0.05
High-Cube Transload and Short-Term Storage Warehouse	154	28%	0.08	0.02	0.10	0.03
High-Cube Fulfillment Center Warehouse (Non-Sort)	155	26%	0.15	0.04	0.16	0.04
High-Cube Parcel Hub Warehouse	156	19%	0.70	0.13	0.64	0.12
Total / Weighted Average		**100%**		**0.240**		**0.240**

Table 2 on the following page presents the estimated daily, AM peak hour, and PM peak hour trip generation for the proposed project. The rates reflect the AM and PM Peak Hour of the Adjacent Street Traffic (also known as the traditional commute peak hours) that occurs within the periods from 7:00 -9:00 AM and from 4:00 -6:00 PM.

It is customary to convert heavy duty trucks into "passenger car equivalents" of PCEs when conducting operations analysis of intersections to simulate their impact on the capacity of an intersection. Converting trucks into PCE's accounts for the physical space that trucks occupy and their effect on the operational characteristics of the intersection. For example, large trucks accelerate from a stop much slower than passenger cars, and this affects the "saturation flow rate" used in calculating intersection delay.

As shown in **Table 2**,on the following page, the proposed project is estimated to generate 27,071 daily PCE trips, 2,900 AM peak hour PCE trips, and 2,898 PM peak hour PCE trips.

C. Project Trip Distribution and Assignment

Project automobile traffic was distributed by general direction (east, west, north, and south) based on the fastest routes during the peak hours that employees would likely use to travel between their home and the project. Project truck traffic was distributed by general direction (east, west, north, and south) and assigned to the most direct route to the designated truck route that provides access in the desired general direction.

Exhibit C-1 illustrates the distribution of project automobile trips in percentages by movement and direction. **Exhibit C-2** illustrates the distribution of project truck trips in percentages by movement and direction. **Exhibit D-1** illustrates the assignment of the project auto trips to the study intersections. **Exhibit D-2** illustrates the assignment of the project total to the study intersections. The estimated trip generation and distribution is also included in the Project Traffic Analysis Scoping Form (**Attachment 1**).

[1] Trip Generation, 11th Edition. Institute of Transportation Engineers. Washington D.C.

Table 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 (Weighted Average of ITE Trip Rates for Land Use Categories 150, 154, 155 (non-sort), and 156)	8,599.96	Vehicle Trip Generation Rates (Trips Per 1,000 Square Feet of Gross Floor Area)						
		2.24	0.18	0.06	0.24	0.07	0.17	0.24
		Total Vehicle Trip Generation						
		19,264	1,589	475	2,064	578	1,486	2,064
	Mode Share	Project Trip Generation by Vehicle Type						
Passenger Cars (Percent of Total)	74.21%	14,296	1,179	352	1,531	429	1,103	1,532
2-Axle Trucks (Percent of Total)	4.55%	877	72	22	94	26	68	94
3-Axle Trucks (Percent of Total)	4.18%	805	66	20	86	24	62	86
4-Axle Trucks (Percent of Total)	17.04%	3,283	271	81	352	98	253	351
	PCE Factor	Project Trip Generation in Passenger Car Equivalents (PCE)						
Passenger Cars)	1.0	14,296	1,179	352	1,531	429	1,103	1,532
2-Axle Trucks	1.5	1,316	108	33	141	39	102	141
3-Axle Trucks	2.0	1,610	132	40	172	48	124	172
4 + Axle Trucks	3.0	9,849	813	243	1,056	294	759	1,053
Total Passenger Car Equivalents (PCE)		**27,071**	**2,232**	**668**	**2,900**	**810**	**2,088**	**2,898**

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 (2013-2014). Based on data from Amazon Fulfillment Center in San Bernardino, CA (1,466,263 square feet in size), and FedEx Center in Bloomington, CA (442,000 square feet in size).
Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions

D. Study Intersections

Focused traffic studies evaluate project access driveways and nearby intersections that project traffic use to access the project site's driveways. This scope proposes to include four existing intersections and two proposed future intersections for inclusion in the study.

1. Air Expressway / Adelanto Road
2. Air Expressway / Gateway Drive
3. Air Expressway / Emerald Road
4. Air Expressway / Phantom West
5. Adelanto Road / Joshua Avenue
6. Adelanto Road / Yucca Road

The intersections of Air Expressway at Adelanto Road, Air Expressway at Gateway Drive, and Adelanto Road at Phantom West are currently signalized. The intersection of Air Expressway at Emerald Road is currently side street stop controlled.

The traffic study does not include a LOS analysis of project driveways but will review the operations, best form of traffic control, and potential safety features (e.g., right turn deceleration lanes) of up to five (5) driveways on Air Expressway that have the potential for queuing and subsequent collisions.

E. Traffic Study Scenarios

The traffic study analysis scenarios, consistent with the city's impact analysis guidelines, include:

1. Existing conditions AM (7-9 AM) and PM (4-6 PM)
2. Background Opening Year conditions (Year 2026):
    a. Growth (conservative estimate of the combined area growth and traffic generated by nearby, but unidentified development, 3.5% ambient growth).

3. Background Opening Year plus Project conditions (Year 2026):
    a. Project traffic added to background condition forecasts.
4. Future Cumulative Conditions (Year 2046):
    a. 20-year horizon forecasts will be extrapolated from year 2040 projections derived from the San Bernardino Transportation Analysis Model (SBTAM).
5. Future Cumulative Conditions with Project (Year 2046):
    a. Project traffic added to the forecasts developed for future year 2046 conditions.

F. Vehicle Miles of Travel (VMT) Screening

The City of Adelanto has developed guidelines for analyzing a development project's VMT in conformance with SB 743 effective as of July 1, 2020. According to the guidelines (*Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (July 2020))* a VMT analysis applies to projects with the potential to cause a significant impact with a project-generated VMT / Service Population (i.e., population plus employment) under baseline or cumulative conditions that exceeds County of San Bernardino regional average baseline VMT of 32.7 VMT/Service Population.

In addition, a VMT analysis applies to projects with the potential to cause a significant impact through its effect on VMT should the addition of the project to baseline or cumulative conditions result in an increase in the countywide link-level VMT / Service Population when compared to the no project scenario.

Project Screening from Conducting VMT Analyses

There are three screening criteria in the city's guidelines adopted in 2020 to effectively screen projects from requiring a project-level VMT analysis and a new screening criterion adopted by the City Council in 2022 that replaces part of one criterion in the guidelines. These include:

- Project located in a Transit Priority Area (this criterion is not applicable in Adelanto as there are no transit priority areas within the city).
- Project located in a "low VMT generating area".
- Project land use is a "locally-serving" type of use including retail (under 50,000 square feet), and the service and institutional land uses listed in the guidelines.
- Project generates less than 3,000 metric tons of CO2 equivalent emissions annually.

The last criterion, based on CO2e emissions, replaces a previous criterion based on average daily trips. Resolution No. 20-41-A adopts a carbon dioxide equivalent (CO2e) threshold for purposes of screening projects from analyzing transportation impacts under CEQA. Application of the applicable screening criteria to the proposed project is described below.

1. <u>Low VMT Area Screening</u>

SBCTA's VMT screening tool evaluates project sites for being located within a "low VMT generating area". These are areas in the which the existing land uses (or the projected land uses) generate low levels of VMT due to the characteristic of the land uses in the area or due to the area's geographic location near other areas with a mix of land uses, so people need not drive far for work, shopping, or school. The tool identifies the average VMT for the land uses in each of the SBCTA model's traffic analysis zones (TAZ's) by horizon year. The average VMT metric for a TAZ is compared against the County's average VMT threshold of 32.7 VMT / service population as adopted by the City of Adelanto. SBCTA's screening tool also applies the Transit Priority Area criterion to proposed projects.

If the land in the TAZ in which the proposed project is located generates VMT less than the threshold, the project is assumed to be in a low VMT generating area. The project may then be presumed to have a non-significant impact on VMT if the project's land use is consistent with the existing and/or planned (zoned) land use within the TAZ that was found to generate low levels of VMT. If the project land use is substantially different than the land use assumed in the SBCTA model, then the project cannot be presumed to have the same low VMT characteristics unless otherwise demonstrated.

Low VMT Generating Area Screening of Proposed Project

The screening tool visual and numeric output for the project site is shown on the following page in **Figure A** and in **Table 3** respectively. The Adelanto Industrial Development project is located within TAZ 53909201 in which the General Plan designated land uses are estimated to generate 96.3 VMT / Service Population in 2025 and 78.1 VMT / Service Population in 2040 which exceed the county's regional average threshold 32.7 VMT / Service Population. As a result, the proposed project is not screened from having to conduct a VMT analysis based on the low VMT-generating area criterion.

If the land in the TAZ in which the proposed project is located generates VMT less than the threshold, the project is in a low VMT generating area. The project may then be presumed to have a non-significant impact on VMT if the project's land use is consistent with the existing and/or planned land use within the TAZ that was found to generate low levels of VMT in the city's General Plan and the region's Sustainable Communities Plan. If the project land use is substantially different than existing or the land use assumed in the above referenced plans, then the project cannot be presumed to have the same low VMT characteristics and requires a detailed VMT analysis.

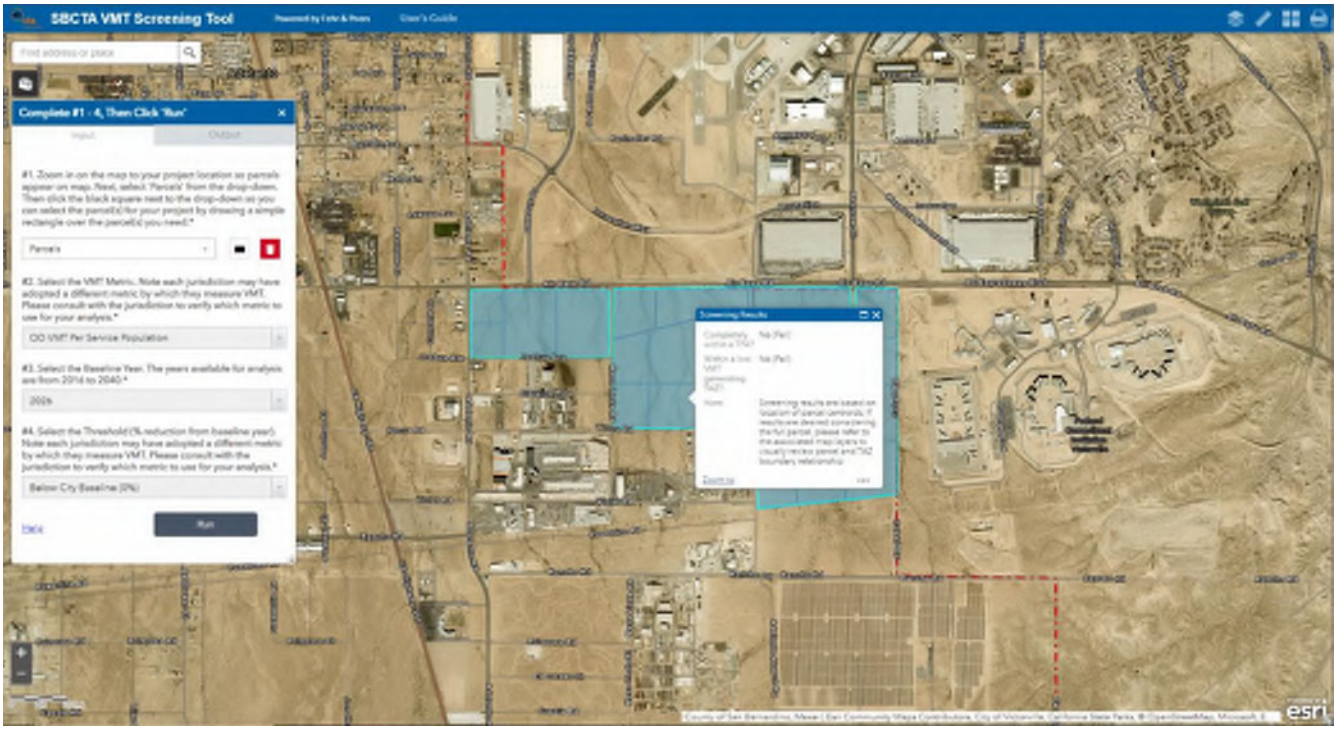


Figure A: *SBCTA Low VMT Area screening tool output indicating that the project is not located within a low VMT generating Traffic Analysis Zone (TAZ).*

Table 3: SBCTA Low VMT Generating Area Screening Results

Planning Year	TAZ Number	Transit Priority Area (TPA)	Metric	TAZ VMT (VMT/Service Population)	County Regional Average (VMT/Service Population) Threshold	Percent Difference
2026 Baseline	53909201	No	VMT / Service Population	83.5	32.7	155%
2046[1] Cumulative	53909201	No	VMT / Service Population	82.6	32.7	153%

Notes:
Source: SBCTA VMT screening tool attribution table for TAZ 53909201. VMT presented (TAZ VMT) is calculated from OD VMT per service population for the year 2026 and 2040 planning horizons.
Service population = residents + employees
[1] SBCTA VMT tool only contains land use data up to year 2040, so the year 2040 planning horizon is used as a proxy for cumulative year 2045.

2. Project Type Screening

The second applicable screening criteria in the city's guidelines, *project type*, screens development projects defined as locally serving, which includes commercial retail under 50,000 square feet and other locally serving land uses listed in the guidelines. Industrial and warehouse land uses are not included in the list of locally-serving uses and, therefore, the project is not screened from having to conduct a VMT analysis based on the project type criterion.

3. CO2-Equivalent Emissions Screening

Based on analysis supporting Resolution No. 20-41-A, this screening criterion includes a list of common land uses and the maximum size of development (dwelling units or square feet of floor area) that would generate less than the threshold established for CO2 equivalent emissions of 3,000 metric tons annually. The list includes warehousing (unrefrigerated) at a maximum of 306,000 square feet. Since the project's 8,599,962 square feet of warehouse exceeds the maximum floor area, the project is not screened from having to conduct a VMT analysis based on the CO2e emissions criterion.

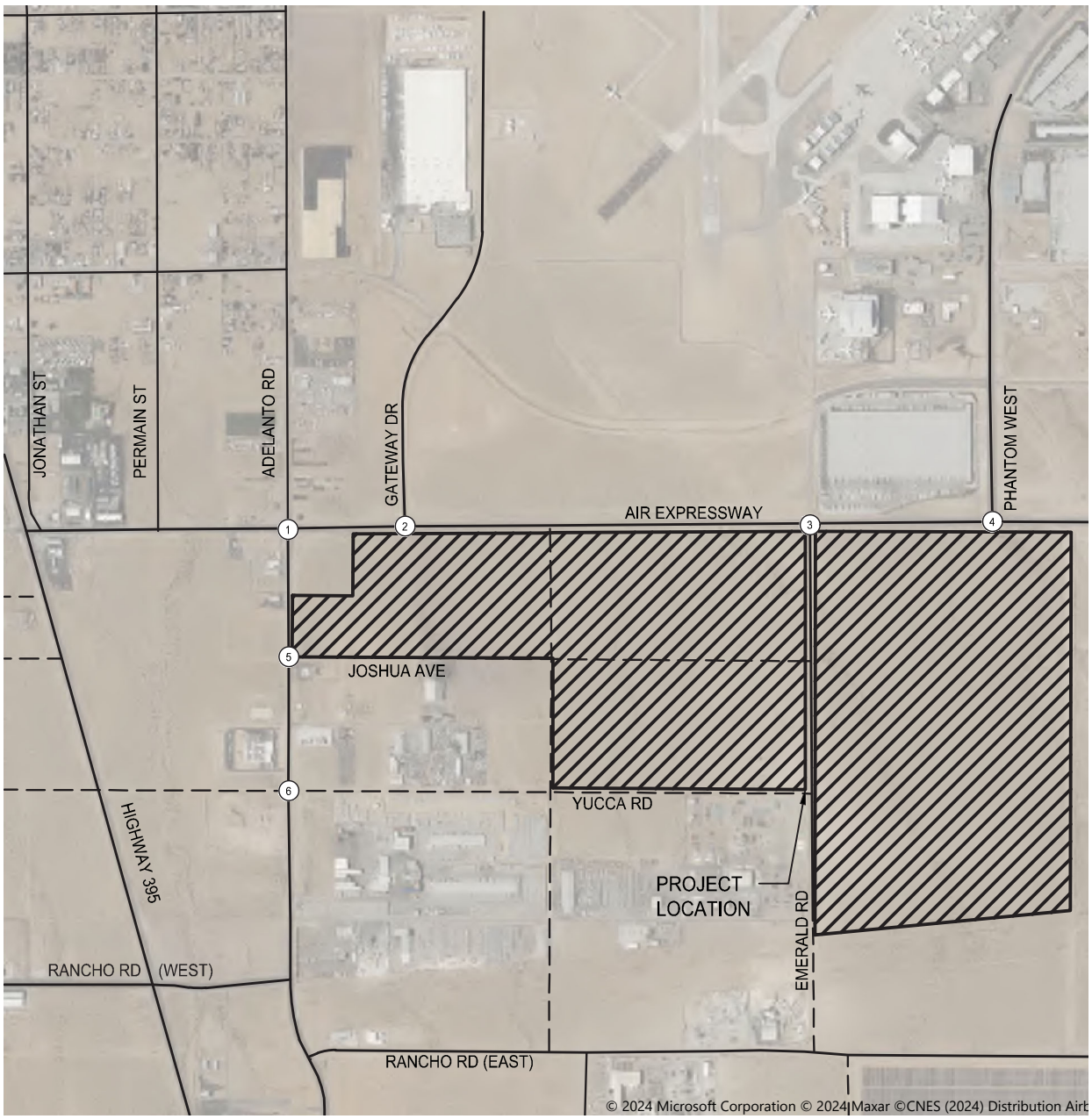
Results of VMT Screening Assessment

The proposed project was evaluated under the three applicable criteria used to screen development from having to conduct a VMT analysis. The project did not meet any of the criteria and, therefore, is required to conduct a detailed VMT analysis to determine potentially significant environmental impacts under CEQA.

If you have any questions or comments, please feel free to contact me at (909) 912-7304.

Attachments:

1. Exhibit A – Vicinity Map
2. Exhibit B – Site Plan
3. Exhibit C-1 – Project Auto Trip Distribution
4. Exhibit C-2 – Project Truck Trip Distribution
5. Exhibit D-1 – Project Auto Trips
6. Exhibit D-2 – Project Truck PCE Trips
7. Exhibit D-3 – Project Total PCE Trips
8. Attachment 1 – Standard Traffic Analysis Scoping Form



N

NOT TO SCALE

(#) - STUDY INTERSECTIONS

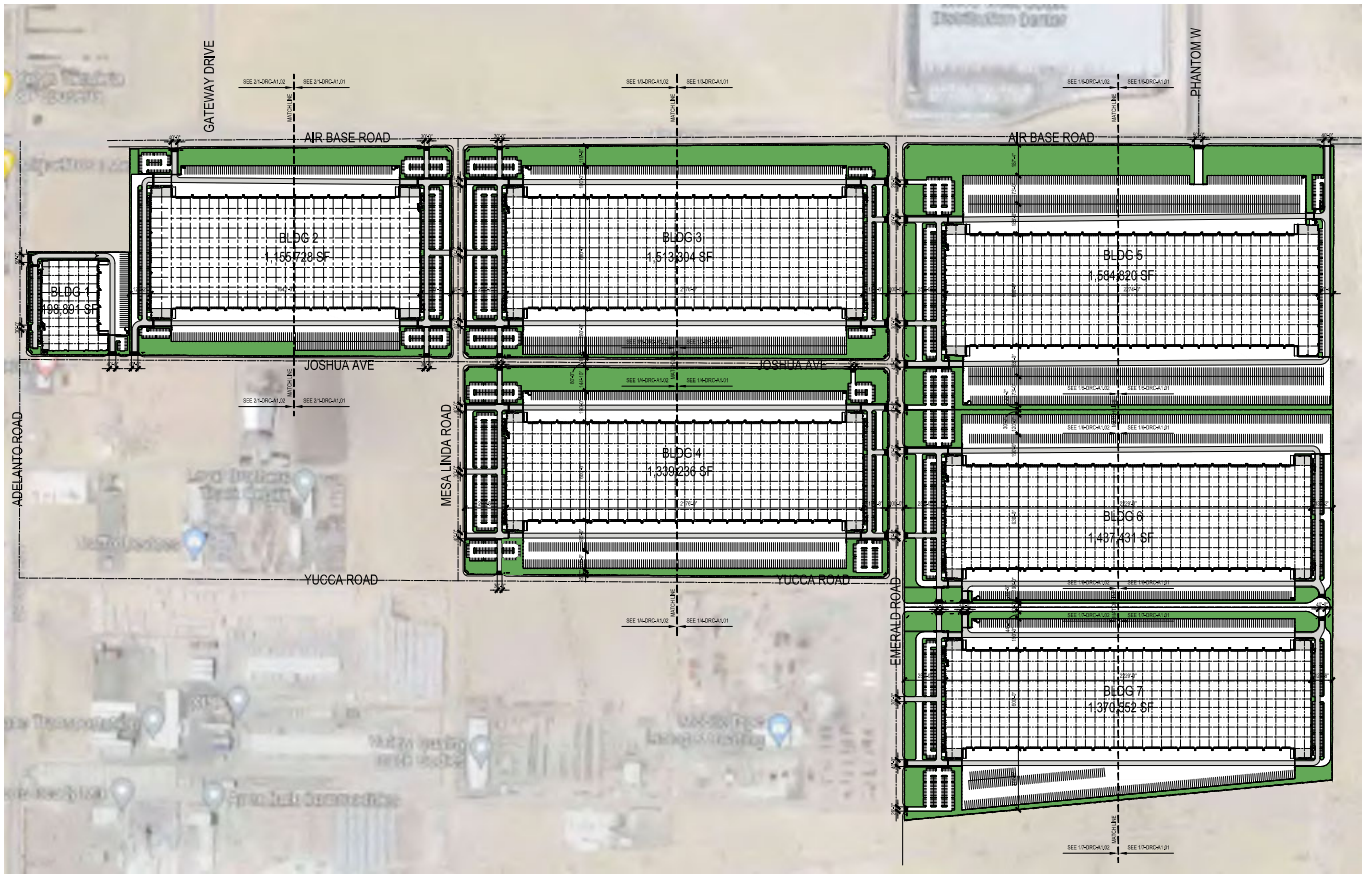
DAVID EVANS AND ASSOCIATES INC.

EXHIBIT A: VICINITY MAP
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TTE\EXHIBITS\Scope\Exhibit A.dwg
Last Opened: Mar 12, 2024 - 4:31pm by: Tim

N

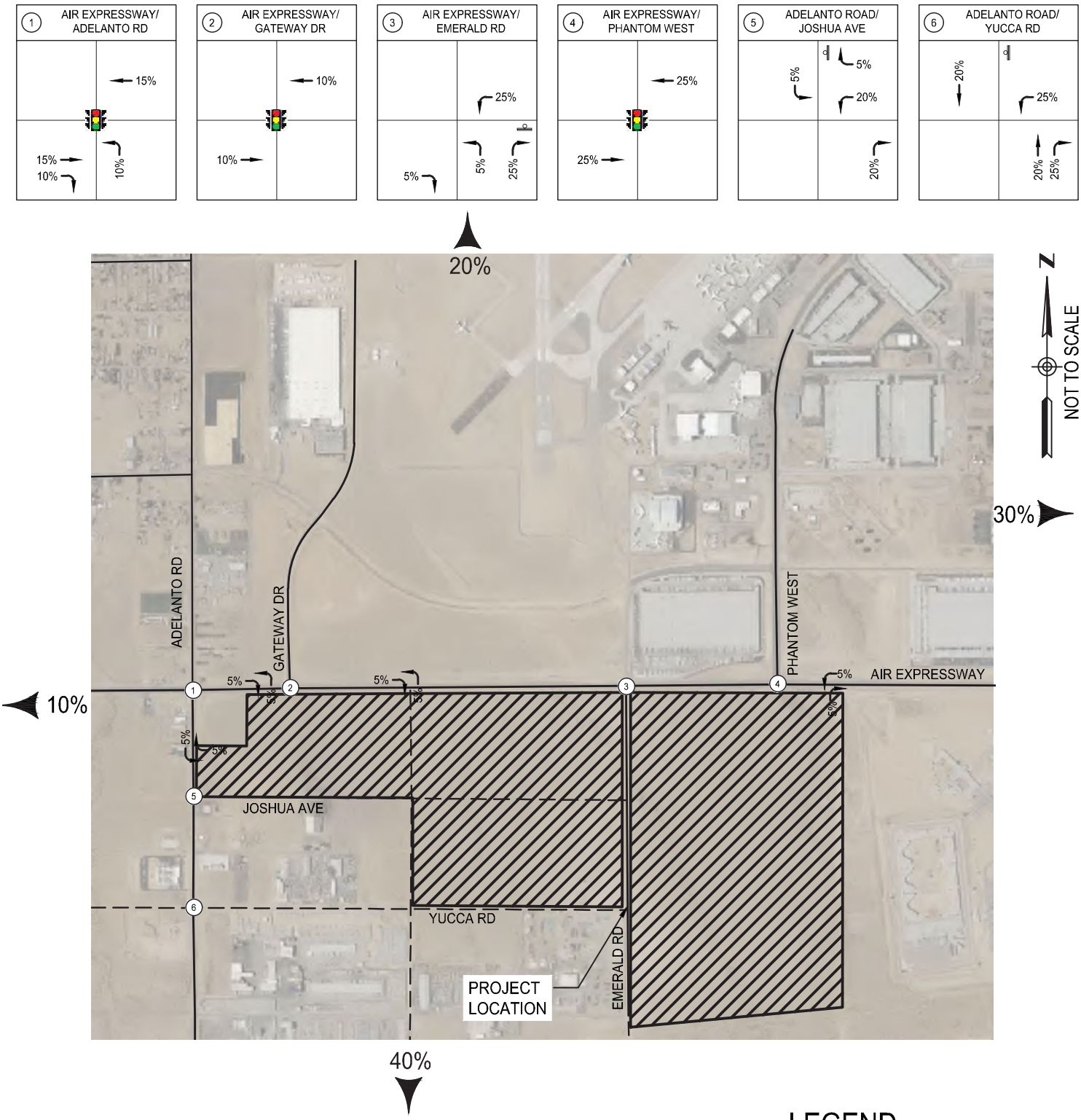
NOT TO SCALE



DAVID EVANS AND ASSOCIATES INC.

EXHIBIT B: SITE PLAN
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIEXHIBITS\Scope\Exhibit B.dwg
Last Opened: Mar 12, 2024 - 11:32am by: Tmm



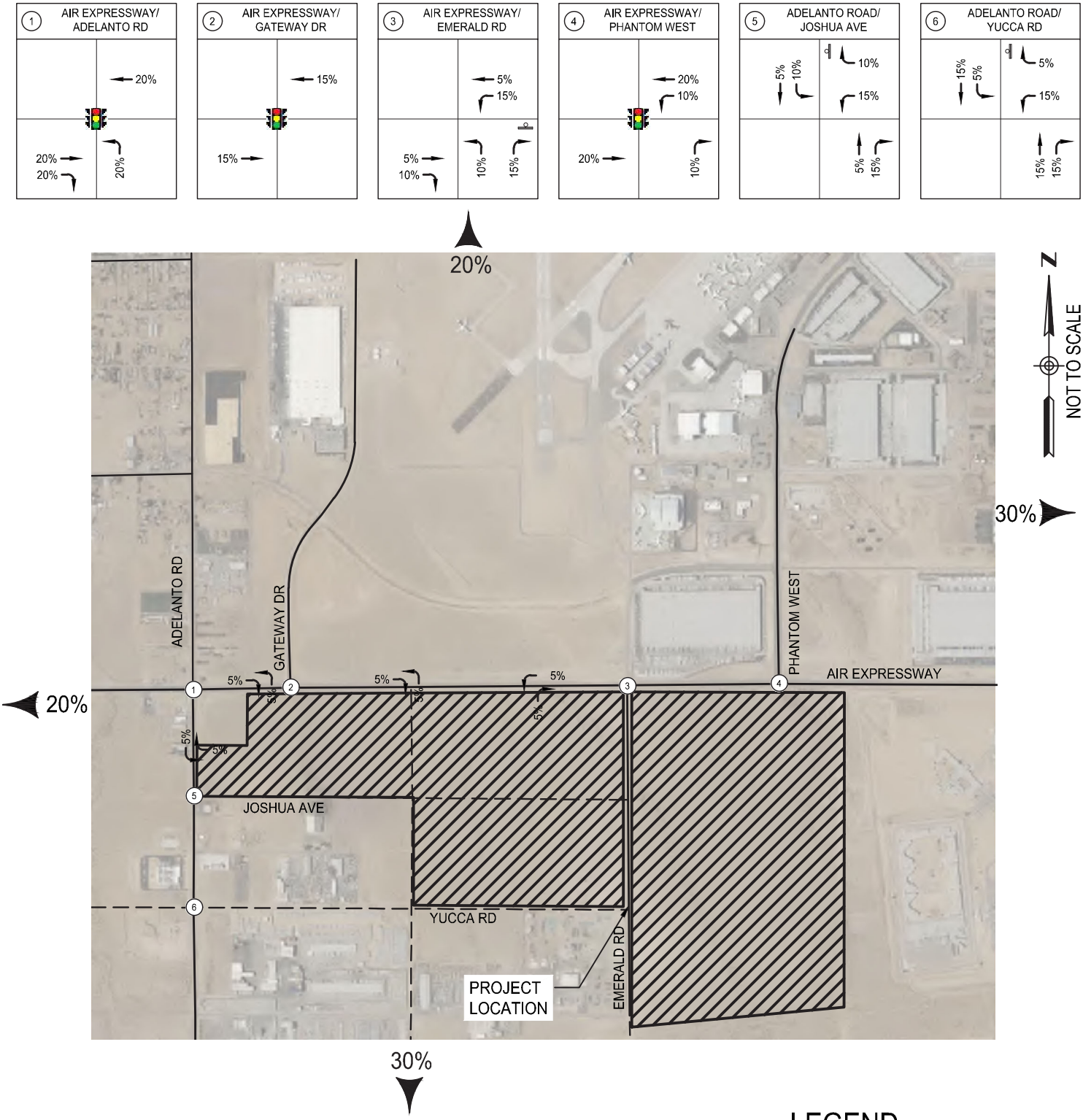
LEGEND

- XX% — GENERAL PROJECT TRIP DISTRIBUTION
- XX% — SPECIFIC PROJECT TRIP PERCENTAGE
- (#) — STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT C-1: PROJECT AUTO TRIP DISTRIBUTION
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Scope\Exhibit C-1.dwg
Last Opened: Apr 15, 2024 - 4:39pm by: Tim



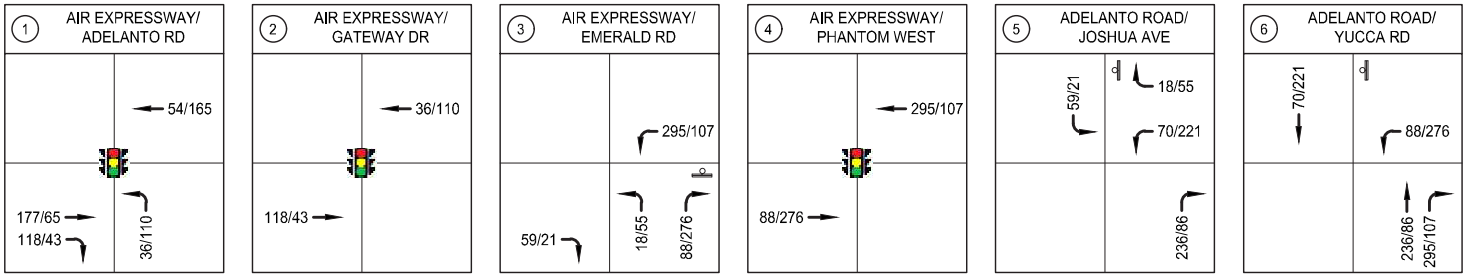
LEGEND

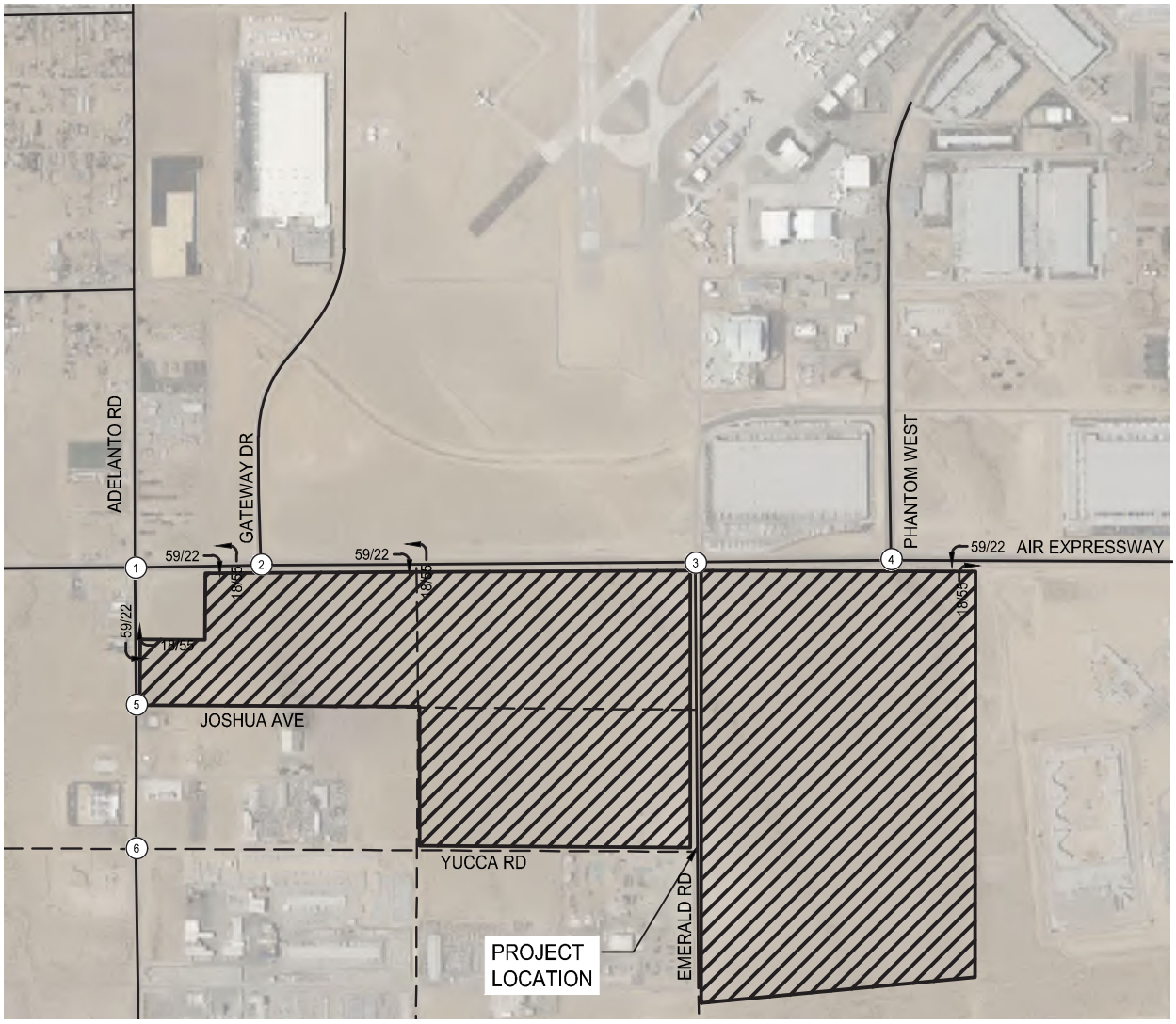
- XX% — GENERAL PROJECT TRIP DISTRIBUTION
- XX% — SPECIFIC PROJECT TRIP PERCENTAGE
- (#) — STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT C-2: PROJECT TRUCK TRIP DISTRIBUTION
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMK\LT00000010\400CAD\TIE\EXHIBITS\Scope\Exhibit C-2.dwg
Last Opened: Apr 15, 2024 - 4:39pm by: Tim





N

NOT TO SCALE

PROJECT AUTO TRIPS

AM PEAK PERIOD - 1,179 IN / 352 OUT
PM PEAK PERIOD - 429 IN / 1,103 OUT

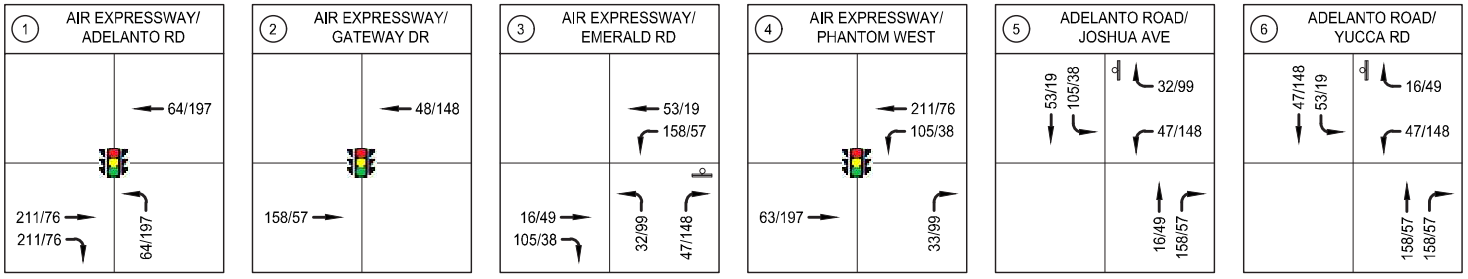
LEGEND

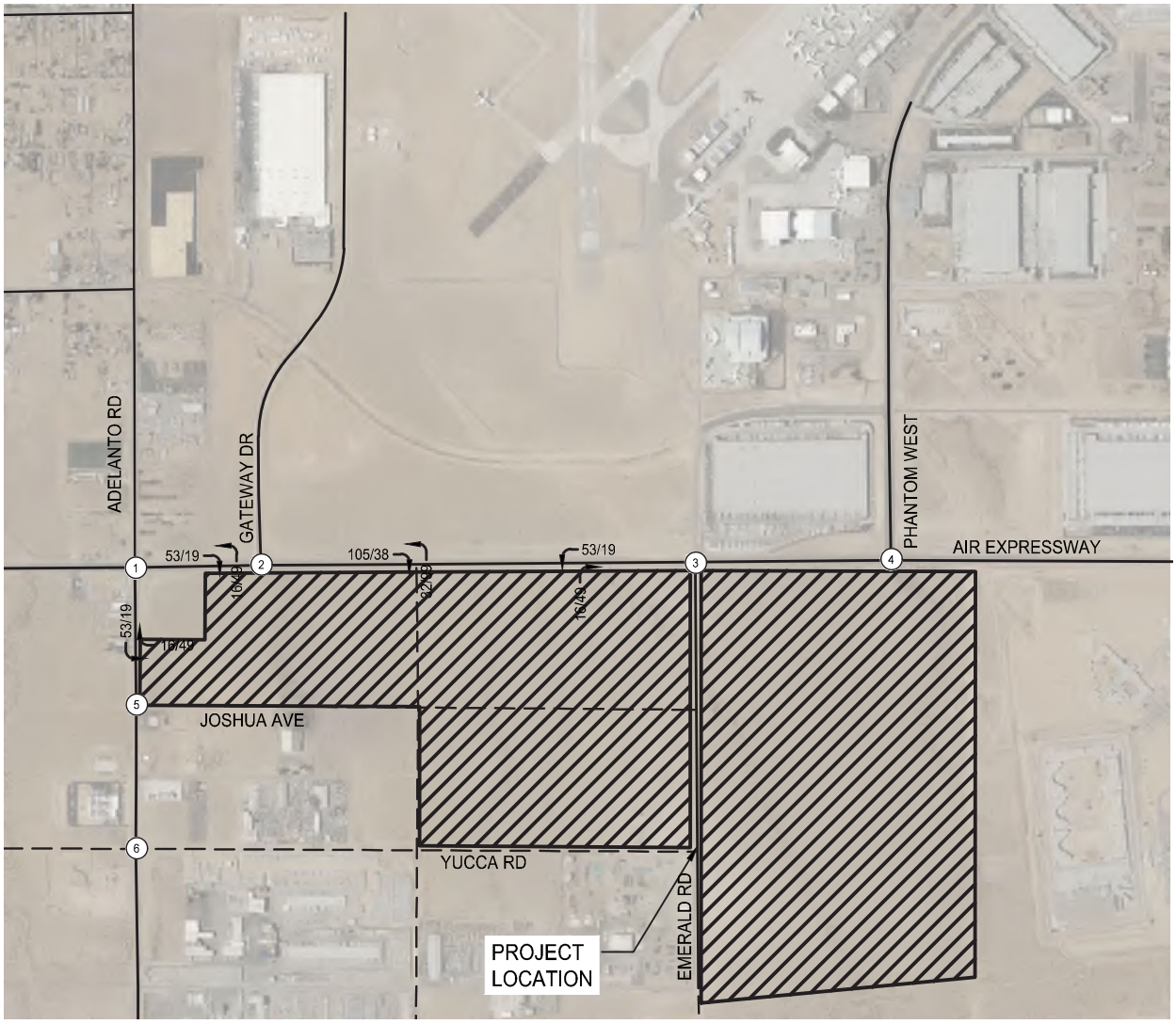
XX/XX - AM/PM PROJECT TRIPS
(#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT D-1: AUTO PROJECT TRIPS
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMK\LT00000001\04400CAD\TIE\EXHIBITS\ScopeExhibit D-1.dwg
Last Opened: Apr 15, 2024 - 4:39pm by: Tim





N

NOT TO SCALE

PROJECT TRUCK PCE TRIPS

AM PEAK PERIOD - 1,053 IN / 316 OUT
PM PEAK PERIOD - 381 IN / 985 OUT

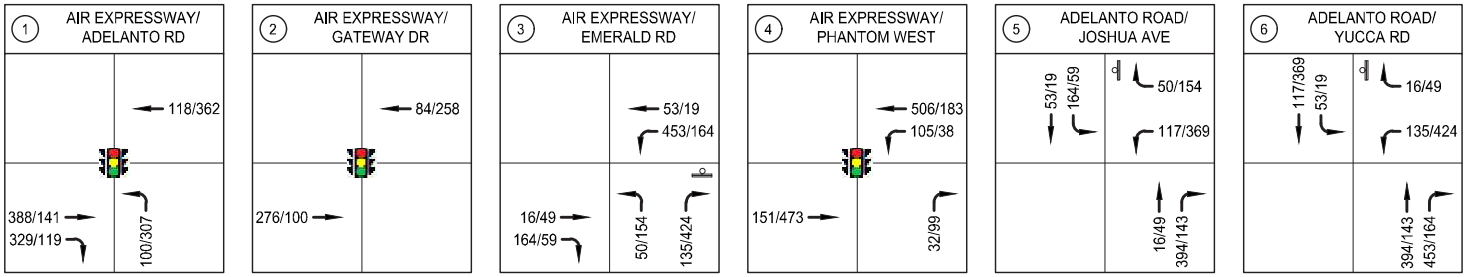
LEGEND

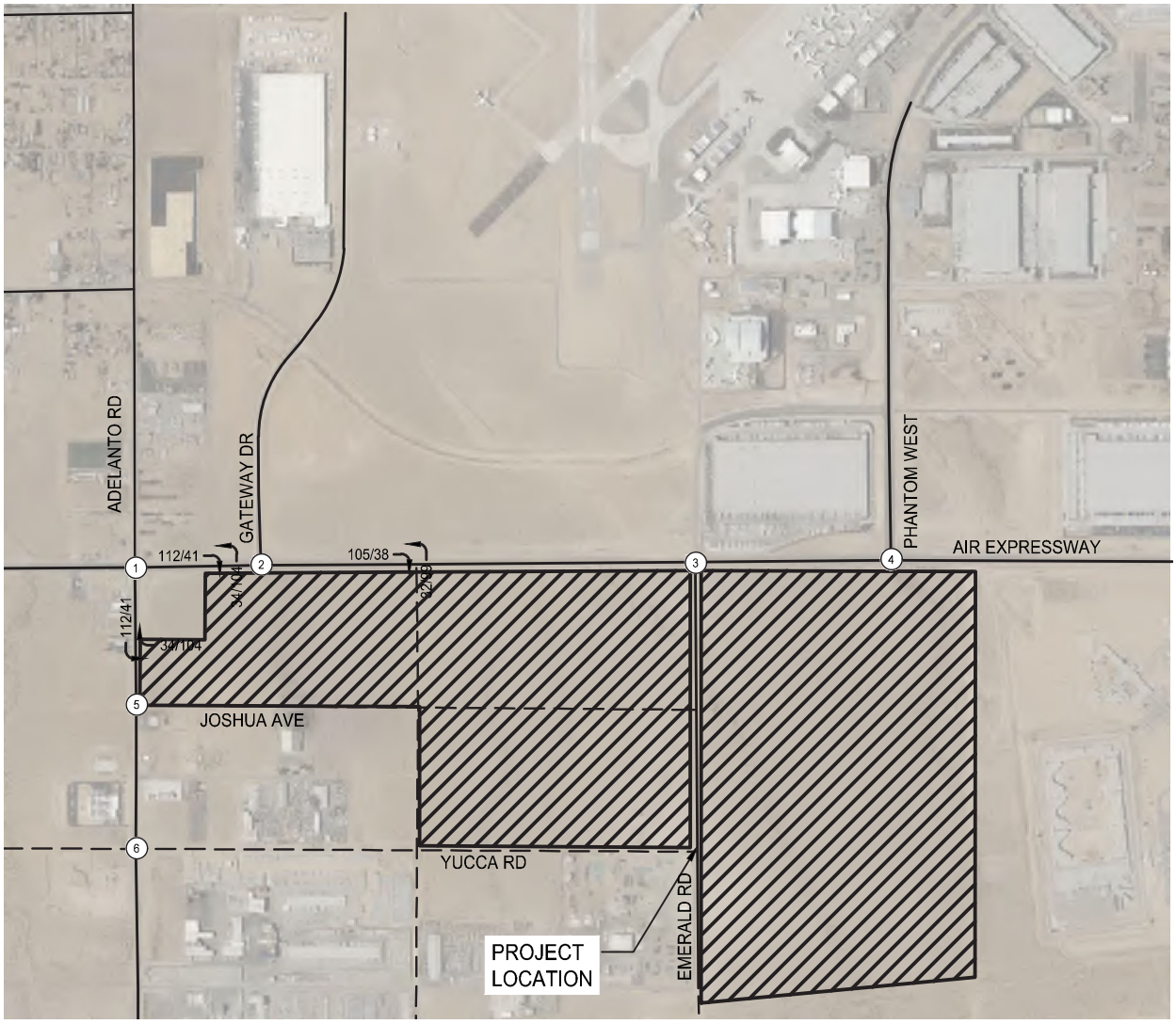
XX/XX - AM/PM PROJECT TRIPS
(#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT D-2: PROJECT TRUCK PCE TRIPS
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMKLT00000001\04000CAD\TIE\EXHIBITS\Scope\Exhibit D-2.dwg
Last Opened: Apr 15, 2024 - 4:39pm by: Tim





N

NOT TO SCALE

PROJECT TOTAL PCE TRIPS

AM PEAK PERIOD - 2,232 IN / 668 OUT
PM PEAK PERIOD - 810 IN / 2,088 OUT

LEGEND

XX/XX - AM/PM PROJECT TRIPS
(#) - STUDY INTERSECTIONS
- STOP CONTROLLED INTERSECTION
- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT D-3: PROJECT TOTAL PCE TRIPS
ADELANTO INDUSTRIAL PARK
ADELANTO, CA

Drawing Name: P:\MMK\LT00000001\04000CAD\TIE\EXHIBITS\ScopeExhibit D-3.dwg
Last Opened: Apr 15, 2024 - 4:39pm by: Tim

Project Scoping Form

This scoping form shall be submitted to the City of Adelanto to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Adelanto Industrial Park
Project Address:	located south of Air Expressway and east of Adelanto Road
Project Opening Year:	2026
Project Description:	The proposed project consists of 8,599,962 square feet General Warehouse on 456.73 acres located south of Air Expressway and east of Adelanto Road in the City of Adelanto.

	Consultant:	**Developer:**
Name:	Jim Daisa **David Evans and Associates**	Dave Mileski **Mileski Living Trust**
Address:	4141 E. Inland Empire Blvd, Suite 250 Ontario, CA	1971 W. 190th Street Ste 100 Torrance, CA 90504
Telephone:	(909) 912-7304	(310) 720-9159
Fax/Email:	Jim.daisa@deainc.com	linda@mileskiholdings.com

Trip Generation Information:

Trip Generation Data Source: Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition

Current General Plan Land Use: _____

Proposed General Plan Land Use: General Warehouse

Current Zoning: _____

Proposed Zoning: _____

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	2,232	668	2,900
PM Trips	0	0	0	810	2,088	2,898

Trip Internalization: ☐ Yes ■ No _____

Diverted Link: ☐ Yes ■ No _____

Pass-By Allowance: ☐ Yes ■ No _____

Potential Screening Checks

Is your project screened from specific analyses (see Page 11 of the guidelines related to LOS assessment and Pages 24-26).

Is the project screened from LOS assessment? ☐ Yes ■ No

LOS screening justification (see Page 11 of the guidelines): _____

Is the project screened from VMT assessment? ☐ Yes ■ No

VMT screening justification (see Pages 24-26 of the guidelines): _____

Level of Service Scoping

- Proposed Trip Distribution (See Exhibit C-1, Primary Trip Distribution, for Detailed Distribution):

	North	South	East	West
Project Auto Trip Distribution	20%	40%	30%	10%
Project Truck Trip Distribution	20%	30%	30%	20%

- Attach list of Approved and Pending Projects that need to be considered (provided by the City Traffic Engineer and adjacent agencies). As outlined in the Traffic Impact Study Scoping Agreement a conservative estimate of the combined area growth and traffic to be generated by nearby development, 3.5% ambient growth.
- Attach list of study intersections/roadway segments – See Traffic Impact Study Scoping Agreement Exhibits C-1, C-2, D-1, D-2, and D-3
- Attach site plan– See Traffic Impact Study Scoping Agreement Exhibit B
- Note other specific items to be addressed:
    - Site access
    - On-site circulation- NO
    - Parking- NO
    - Consistency with Plans supporting Bikes/Peds/Transit- NO
    - Other _____
- Date of Traffic Counts _____
- Attach proposed analysis scenarios (years plus proposed forecasting approach) – See Traffic Impact Study Scoping Agreement
- Attach proposed phasing approach (if the project is phased) – Not applicable

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used SBTAM Forecast Model
- Attach SBCTA Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

DAVID EVANS AND ASSOCIATES INC.

Appendix B: Traffic Counts

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: ADELANTO RD
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 05-25-23

PEAK HOUR: 07:45AM

NORTH LEG

TOTAL: 44

Rt	Thru	Lt	
8	24	12	Total
0	5	1	1st
1	6	4	2nd
2	4	4	3rd
5	9	3	4th

EAST LEG TOTAL: 566

	1st	2nd	3rd	4th	Total
Rt	5	3	7	27	42
Thru	142	114	99	123	478
Lt	12	18	10	6	46

WEST LEG TOTAL: 552

Total	1st	2nd	3rd	4th	
1	0	0	0	1	Lt
533	135	119	134	145	Thru
18	11	2	0	5	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.65
SOUTH LEG = 0.83
EAST LEG = 0.89
WEST LEG = 0.91

ALL LEGS = 0.91

SOUTH LEG

TOTAL: 286

	Lt	Thru	Rt
1st	10	24	52
2nd	14	34	26
3rd	8	31	41
4th	2	19	25
Total	34	108	144

HOUR TOTAL: 1,448

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : ADELANTO RD — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 05-25-23

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
					NORTH LEG							
3	1	4	1	1	0	0	1	0	1	0	1	13
3	0	1	1	2	0	0	0	0	1	2	0	10
4	4	4	0	0	0	0	0	0	1	2	1	16
0	5	1	0	0	0	0	0	0	0	0	0	6
1	6	4	0	0	0	0	0	0	0	0	0	11
2	3	4	0	1	0	0	0	0	0	0	0	10
5	8	3	0	0	0	0	1	0	0	0	0	17
9	8	5	0	0	0	0	0	0	0	0	0	22
27	35	26	2	4	0	0	2	0	3	4	2	105
					SOUTH LEG							
13	3	2	0	0	0	0	0	0	3	1	0	22
35	3	3	0	1	0	2	1	0	3	0	1	49
41	3	2	1	1	0	0	0	0	3	1	1	53
45	24	10	2	0	0	2	0	0	3	0	0	86
18	33	14	4	0	0	2	0	0	2	1	0	74
37	31	8	0	0	0	0	0	0	4	0	0	80
23	18	2	0	0	0	1	1	0	1	0	0	46
11	37	7	0	0	0	1	0	0	3	2	1	62
223	152	48	7	2	0	8	2	0	22	5	3	472
					EAST LEG							
0	57	8	0	0	0	0	0	0	0	2	0	67
1	127	18	1	3	0	0	3	0	2	5	0	160
1	97	8	3	6	0	0	0	0	0	3	0	118
3	137	12	1	1	0	0	3	0	1	1	0	159
1	111	17	1	0	0	0	0	0	1	3	1	135
4	95	9	2	0	0	0	0	0	1	4	1	116
27	121	6	0	0	0	0	0	0	0	2	0	156
6	92	14	1	0	0	0	0	0	3	7	1	124
43	837	92	9	10	0	0	6	0	8	27	3	1035
					WEST LEG							
3	73	8	0	0	0	0	0	0	0	4	0	88
5	85	1	0	1	0	0	0	0	0	3	0	95
6	144	4	0	1	0	0	1	0	0	1	0	157
11	124	0	0	3	0	0	1	0	0	7	0	146
2	112	0	0	2	0	0	1	0	0	4	0	121
0	127	0	0	1	0	0	0	0	0	6	0	134
5	139	1	0	2	0	0	0	0	0	4	0	151
16	96	1	0	0	0	0	1	0	0	4	0	118
48	900	15	0	10	0	0	4	0	0	33	0	1010

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: ADELANTO RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 07:00AM-08:00AM DATE: 05-25-23

NORTH LEG

Rt	Thru	Lt	
15	18	12	Total
5	3	5	1st
5	4	1	2nd
5	6	5	3rd
0	5	1	4th

	1st	2nd	3rd	4th	Total
Rt	0	4	4	5	13
Thru	59	138	106	142	445
Lt	8	18	8	12	46

Total	1st	2nd	3rd	4th	
13	8	1	4	0	Lt
448	77	89	147	135	Thru
25	3	5	6	11	Rt

	Lt	Thru	Rt
1st	2	4	16
2nd	4	5	40
3rd	3	5	45
4th	10	24	52
Total	19	38	153

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: ADELANTO RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 08:00AM-09:00AM DATE: 05-25-23

NORTH LEG

17	27	16	Total
1	6	4	1st
2	4	4	2nd
5	9	3	3rd
9	8	5	4th
Rt	Thru	Lt	

Rt	3	7	27	10	47
Thru	114	99	123	99	435
Lt	18	10	6	15	49
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
2	0	0	1	1	Lt
499	119	134	145	101	Thru
23	2	0	5	16	Rt

	Lt	Thru	Rt
1st	14	34	26
2nd	8	31	41
3rd	2	19	25
4th	8	39	15
Total	32	123	107

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: ADELANTO RD
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 05-25-23

PEAK HOUR: 05:00PM

NORTH LEG

TOTAL: 93

Rt	Thru	Lt	
2	63	28	Total
2	24	9	1st
0	17	10	2nd
0	8	2	3rd
0	14	7	4th

EAST LEG TOTAL: 718

	1st	2nd	3rd	4th	Total
Rt	8	2	1	0	11
Thru	157	158	145	135	595
Lt	31	21	40	20	112

WEST LEG TOTAL: 601

Total	1st	2nd	3rd	4th	
	0	0	0	0	Lt
587	164	135	139	149	Thru
14	2	8	1	3	Rt

PEAK HOUR FACTORS

NORTH LEG = 0.66
SOUTH LEG = 0.57
EAST LEG = 0.92
WEST LEG = 0.91

ALL LEGS = 0.83

SOUTH LEG

TOTAL: 212

	Lt	Thru	Rt
1st	10	17	66
2nd	1	13	18
3rd	2	16	27
4th	6	11	25
Total	19	57	136

HOUR TOTAL: 1,624

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : ADELANTO RD — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 05-25-23

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												
0	0	3	0	0	0	0	0	0	0	0	0	3
0	0	13	0	0	0	0	0	0	0	0	0	13
0	0	1	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
2	24	9	0	0	0	0	0	0	0	0	0	35
0	16	10	0	0	0	0	0	0	0	1	0	27
0	7	2	0	1	0	0	0	0	0	0	0	10
0	14	7	0	0	0	0	0	0	0	0	0	21
2	61	45	0	1	0	0	0	0	0	1	0	110
SOUTH LEG												
11	3	3	0	0	0	0	0	0	0	0	0	17
15	1	3	2	0	0	0	0	0	1	0	0	22
56	9	10	1	0	0	0	0	0	2	0	0	78
30	12	20	0	0	0	0	0	0	2	0	0	64
66	17	10	0	0	0	0	0	0	0	0	0	93
16	13	1	0	0	0	0	0	0	2	0	0	32
24	16	2	0	0	0	1	0	0	2	0	0	45
24	11	6	0	0	0	0	0	0	1	0	0	42
242	82	55	3	0	0	1	0	0	10	0	0	393
EAST LEG												
8	131	5	0	0	0	0	0	0	0	0	0	144
12	156	4	1	0	0	1	0	0	1	2	0	177
0	152	27	0	2	0	0	1	0	2	5	0	189
0	150	9	0	0	0	0	2	0	0	1	0	162
7	155	31	0	1	0	0	0	0	1	1	0	196
1	154	21	0	2	0	1	0	0	0	2	0	181
0	139	40	1	0	0	0	0	0	0	6	0	186
0	129	20	0	0	0	0	0	0	0	6	0	155
28	1166	157	2	5	0	2	3	0	4	23	0	1390
WEST LEG												
0	129	0	0	0	0	0	0	0	0	1	0	130
8	128	5	0	1	0	0	1	0	0	3	0	146
4	122	0	0	1	0	0	0	0	0	5	0	132
2	101	0	0	0	0	0	1	0	0	5	0	109
2	160	0	0	0	0	0	1	0	0	3	0	166
6	131	0	0	2	0	0	0	0	2	2	0	143
1	137	0	0	0	0	0	0	0	0	2	0	140
3	145	0	0	0	0	0	0	0	0	4	0	152
26	1053	5	0	4	0	0	3	0	2	25	0	1118

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: ADELANTO RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 04:00PM-05:00PM DATE: 05-25-23

NORTH LEG

Rt	Thru	Lt	
0	0	17	Total
0	0	3	1st
0	0	13	2nd
0	0	1	3rd
0	0	0	4th

	1st	2nd	3rd	4th	Total
Rt	8	15	2	0	25
Thru	131	158	160	153	602
Lt	5	4	27	9	45

Total	1st	2nd	3rd	4th	
5	0	5	0	0	Lt
498	130	133	128	107	Thru
14	0	8	4	2	Rt

	Lt	Thru	Rt
1st	3	3	11
2nd	3	1	18
3rd	10	9	59
4th	20	12	32
Total	36	25	120

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: ADELANTO RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 05:00PM-06:00PM DATE: 05-25-23

NORTH LEG

Rt	Thru	Lt	
2	63	28	Total
2	24	9	1st
0	17	10	2nd
0	8	2	3rd
0	14	7	4th

	1st	2nd	3rd	4th	Total
Rt	8	2	1	0	11
Thru	157	158	145	135	595
Lt	31	21	40	20	112

Total	1st	2nd	3rd	4th	
0	0	0	0	0	Lt
587	164	135	139	149	Thru
14	2	8	1	3	Rt

	Lt	Thru	Rt
1st	10	17	66
2nd	1	13	18
3rd	2	16	27
4th	6	11	25
Total	19	57	136

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: GATEWAY DR
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 04-23-24

PEAK HOUR: 07:45AM

NORTH LEG

TOTAL: 31

Rt	Thru	Lt	
6		25	Total
1		4	1st
3		5	2nd
0		6	3rd
2		10	4th

EAST LEG TOTAL: 628

	1st	2nd	3rd	4th	Total
Rt	16	21	22	16	75
Thru	145	128	141	139	553
Lt					

WEST LEG TOTAL: 527

Total	1st	2nd	3rd	4th	
42	6	10	11	15	Lt
485	139	124	106	116	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.65
SOUTH LEG =
EAST LEG = 0.96
WEST LEG = 0.91

ALL LEGS = 0.95

SOUTH LEG

TOTAL: 0

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

HOUR TOTAL: 1,186

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : GATEWAY DR — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 04-23-24

BEGINNING TIME : 07:00AM

AUTOS RT	AUTOS THRU	AUTOS LT	LARGE 2 AXLE RT	LARGE 2 AXLE THRU	LARGE 2 AXLE LT	3 AXLE RT	3 AXLE THRU	3 AXLE LT	4(+) AXLE RT	4(+) AXLE THRU	4(+) AXLE LT	TOTALS
					NORTH LEG							
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	0	0	0	0	1	3
2	0	0	0	0	0	0	0	0	0	0	0	2
1	0	0	0	0	0	0	0	1	0	0	3	5
2	0	3	0	0	1	1	0	0	0	0	1	8
0	0	4	0	0	1	0	0	1	0	0	0	6
2	0	8	0	0	0	0	0	1	0	0	1	12
2	0	8	0	0	0	0	0	0	0	0	1	11
9	0	25	0	0	2	1	0	3	0	0	7	47
					SOUTH 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
					EAST LEG							
6	81	0	0	0	0	0	0	0	0	1	0	88
12	79	0	1	1	0	0	1	0	1	4	0	99
6	119	0	0	0	0	0	0	0	4	4	0	133
15	139	0	0	2	0	0	1	0	1	3	0	161
16	123	0	2	1	0	0	0	0	3	4	0	149
17	132	0	0	4	0	0	0	0	5	5	0	163
11	136	0	1	0	0	2	0	0	2	3	0	155
12	102	0	0	1	0	0	2	0	3	6	0	126
95	911	0	4	9	0	2	4	0	19	30	0	1074
					WEST LEG							
0	60	1	0	0	0	0	0	0	0	3	0	64
0	125	1	0	0	1	0	1	0	0	3	0	131
0	117	0	0	1	0	0	0	1	0	3	1	123
0	132	6	0	1	0	0	1	0	0	5	0	145
0	117	7	0	0	1	0	1	0	0	6	2	134
0	99	8	0	3	1	0	0	2	0	4	0	117
0	106	13	0	2	0	0	1	0	0	7	2	131
0	103	6	0	3	2	0	0	0	0	4	1	119
0	859	42	0	10	5	0	4	3	0	35	6	964

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: GATEWAY DR

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 07:00AM-08:00AM DATE: 04-23-24

NORTH LEG

Rt	Thru	Lt	
3		7	Total
0		0	1st
0		3	2nd
2		0	3rd
1		4	4th

	1st	2nd	3rd	4th	Total
Rt	6	14	10	16	46
Thru	82	85	123	145	435
Lt					

Total	1st	2nd	3rd	4th	
11	1	2	2	6	Lt
452	63	129	121	139	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: GATEWAY DR

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 08:00AM-09:00AM DATE: 04-23-24

NORTH LEG

Rt	Thru	Lt	
7		30	Total
3		5	1st
0		6	2nd
2		10	3rd
2		9	4th

	1st	2nd	3rd	4th	Total
Rt	21	22	16	15	74
Thru	128	141	139	111	519
Lt					

Total	1st	2nd	3rd	4th	
45	10	11	15	9	Lt
456	124	106	116	110	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: GATEWAY DR
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 04-23-24

PEAK HOUR: 04:15PM

NORTH LEG

TOTAL: 59

Rt	Thru	Lt	
14		45	Total
2		14	1st
2		8	2nd
5		12	3rd
5		11	4th

EAST LEG TOTAL: 626

	1st	2nd	3rd	4th	Total
Rt	13	15	12	10	50
Thru	153	141	135	147	576
Lt					

WEST LEG TOTAL: 687

Total	1st	2nd	3rd	4th	
11	3	4	3	1	Lt
676	167	166	171	172	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.87
SOUTH LEG =
EAST LEG = 0.94
WEST LEG = 0.99

ALL LEGS = 0.97

SOUTH LEG

TOTAL: 0

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

HOUR TOTAL: 1,372

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : GATEWAY DR — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 04-23-24

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												
1	0	10	0	0	2	0	0	3	0	0	2	18
1	0	13	0	0	0	0	0	1	1	0	0	16
1	0	8	0	0	0	0	0	0	1	0	0	10
4	0	6	0	0	1	0	0	3	1	0	2	17
4	0	9	0	0	0	0	0	0	1	0	2	16
4	0	9	0	0	0	1	0	0	2	0	1	17
6	0	14	0	0	1	0	0	1	0	0	2	24
3	0	12	0	0	0	1	0	0	1	0	2	19
24	0	81	0	0	4	2	0	8	7	0	11	137
SOUTH 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
EAST LEG												
1	132	0	0	5	0	0	2	0	4	4	0	148
13	143	0	0	0	0	0	2	0	0	8	0	166
14	129	0	0	1	0	0	2	0	1	9	0	156
8	127	0	0	2	0	1	0	0	3	6	0	147
9	141	0	0	1	0	0	0	0	1	5	0	157
15	139	0	0	0	0	0	1	0	2	1	0	158
15	150	0	0	0	0	1	0	0	2	5	0	173
11	140	0	0	1	0	0	0	0	2	3	0	157
86	1101	0	0	10	0	2	7	0	15	41	0	1262
WEST LEG												
0	148	0	0	2	0	0	3	0	0	4	1	158
0	154	2	0	5	0	0	0	0	0	8	1	170
0	153	3	0	2	0	0	0	0	0	11	1	170
0	161	1	0	1	0	0	0	0	0	9	2	174
0	163	1	0	2	0	0	1	0	0	6	0	173
0	132	2	0	2	0	0	0	0	0	2	0	138
0	146	2	0	1	0	0	1	0	0	9	3	162
0	131	3	0	2	0	0	0	0	0	5	1	142
0	1188	14	0	17	0	0	5	0	0	54	9	1287

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: GATEWAY DR

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 04:00PM-05:00PM DATE: 04-23-24

NORTH LEG

Rt	Thru	Lt	
10		51	Total
1		17	1st
2		14	2nd
2		8	3rd
5		12	4th

	1st	2nd	3rd	4th	Total
Rt	5	13	15	12	45
Thru	143	153	141	135	572
Lt					

Total	1st	2nd	3rd	4th	
11	1	3	4	3	Lt
661	157	167	166	171	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: GATEWAY DR

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 05:00PM-06:00PM DATE: 04-23-24

NORTH LEG

Rt	Thru	Lt	
23		53	Total
5		11	1st
7		10	2nd
6		18	3rd
5		14	4th

	1st	2nd	3rd	4th	Total
Rt	10	17	18	13	58
Thru	147	141	155	144	587
Lt					

Total	1st	2nd	3rd	4th	
12	1	2	5	4	Lt
603	172	136	157	138	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: EMRERALD RD
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 08-02-23

PEAK HOUR: 07:45AM

NORTH LEG

TOTAL: 0

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

EAST LEG TOTAL: 526

	1st	2nd	3rd	4th	Total
Rt					
Thru	129	120	129	136	514
Lt	3	3	3	3	12

WEST LEG TOTAL: 473

Total	1st	2nd	3rd	4th	
					Lt
451	133	119	83	116	Thru
22	6	6	4	6	Rt

SOUTH LEG

TOTAL: 26

	Lt	Thru	Rt
1st	1		5
2nd	4		6
3rd	3		1
4th	2		4
Total	10		16

PEAK HOUR FACTORS

NORTH LEG =
SOUTH LEG = 0.65
EAST LEG = 0.95
WEST LEG = 0.85

ALL LEGS = 0.93

HOUR TOTAL: 1,025

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : EMRERALD RD — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 08-02-23

BEGINNING TIME : 07:00AM

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
SOUTH 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
2	0	1	0	0	0	0	0	0	1	0	1	5
5	0	0	0	0	0	0	0	0	0	0	1	6
6	0	4	0	0	0	0	0	0	0	0	0	10
1	0	3	0	0	0	0	0	0	0	0	0	4
4	0	2	0	0	0	0	0	0	0	0	0	6
3	0	2	0	0	0	0	0	0	0	0	0	5
21	0	12	0	0	0	0	0	0	1	0	2	36
EAST LEG												
0	65	2	0	2	0	0	0	0	0	2	0	71
0	79	0	0	1	0	0	1	0	0	2	0	83
0	111	1	0	0	0	0	1	0	0	3	2	118
0	121	1	0	3	0	0	0	0	0	5	2	132
0	117	2	0	1	0	0	0	0	0	2	1	123
0	122	1	0	1	0	0	3	0	0	3	2	132
0	135	1	0	0	0	0	0	0	0	1	2	139
0	90	0	0	2	0	0	1	0	0	3	1	97
0	840	8	0	10	0	0	6	0	0	21	10	895
WEST LEG												
0	50	0	0	1	0	0	0	0	0	4	0	55
0	125	0	0	0	0	0	2	0	0	2	0	129
3	111	0	0	2	0	0	1	0	1	2	0	120
5	132	0	0	0	0	0	0	0	1	1	0	139
5	114	0	0	2	0	0	2	0	1	1	0	125
3	77	0	0	1	0	0	0	0	1	5	0	87
4	111	0	0	0	0	0	1	0	2	4	0	122
3	106	0	0	1	0	0	0	0	0	3	0	113
23	826	0	0	7	0	0	6	0	6	22	0	890

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: EMRERALD RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 07:00AM-08:00AM DATE: 08-02-23

NORTH LEG

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

	1st	2nd	3rd	4th	Total
Rt					
Thru	69	83	115	129	396
Lt	2	0	3	3	8

Total	1st	2nd	3rd	4th	
					Lt
433	55	129	116	133	Thru
10	0	0	4	6	Rt

	Lt	Thru	Rt
1st	0		0
2nd	0		0
3rd	2		3
4th	1		5
Total	3		8

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: EMRERALD RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 08:00AM-09:00AM DATE: 08-02-23

NORTH LEG

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

	1st	2nd	3rd	4th	Total
Rt					
Thru	120	129	136	96	481
Lt	3	3	3	1	10

Total	1st	2nd	3rd	4th	
					Lt
428	119	83	116	110	Thru
19	6	4	6	3	Rt

	Lt	Thru	Rt
1st	4		6
2nd	3		1
3rd	2		4
4th	2		3
Total	11		14

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: EMRERALD RD
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 08-02-23

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 0

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

EAST LEG TOTAL: 544

Rt					
Thru	134	110	153	140	537
Lt	2	2	0	3	7
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
					Lt
608	149	150	161	148	Thru
9	4	1	1	3	Rt

WEST LEG TOTAL: 617

PEAK HOUR FACTORS

NORTH LEG =
SOUTH LEG = 0.64
EAST LEG = 0.89
WEST LEG = 0.95

ALL LEGS = 0.92

	Lt	Thru	Rt
1st	6		3
2nd	5		3
3rd	4		2
4th	0		0
Total	15		8

TOTAL: 23

SOUTH LEG

HOUR TOTAL: 1,184

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : EMRERALD RD — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 08-02-23

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												
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	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												
1	0	2	0	0	0	0	0	0	2	0	2	7
2	0	5	0	0	0	0	0	0	1	0	1	9
0	0	5	0	0	0	0	0	0	3	0	1	9
1	0	4	0	0	0	0	0	0	2	0	1	8
1	0	3	0	0	0	0	0	0	1	0	1	6
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	0	1	0	0	2
5	0	21	0	0	0	0	0	0	10	0	6	42
EAST LEG												
0	124	1	0	0	0	0	1	0	0	1	1	128
0	128	3	0	1	0	0	0	0	0	2	1	135
0	131	0	0	0	0	0	2	0	0	1	2	136
0	105	2	0	2	0	0	0	0	0	3	0	112
0	152	0	0	0	0	0	0	0	0	1	0	153
0	136	3	0	1	0	0	1	0	0	2	0	143
0	127	2	0	1	0	0	0	0	0	1	0	131
0	133	0	0	0	0	0	0	0	0	1	0	134
0	1036	11	0	5	0	0	4	0	0	12	4	1072
WEST LEG												
2	120	0	0	0	0	0	0	0	1	2	0	125
1	136	0	0	2	0	0	0	0	1	1	0	141
3	145	0	0	0	0	0	2	0	1	2	0	153
0	146	0	0	1	0	0	2	0	1	1	0	151
1	159	0	0	1	0	0	0	0	0	1	0	162
1	145	0	0	0	0	0	0	0	2	3	0	151
0	131	0	0	1	0	0	0	0	0	1	0	133
2	129	0	0	0	0	0	1	0	0	1	0	133
10	1111	0	0	5	0	0	5	0	6	12	0	1149

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: EMRERALD RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 04:00PM-05:00PM DATE: 08-02-23

NORTH LEG

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

	1st	2nd	3rd	4th	Total
Rt					
Thru	126	131	134	110	501
Lt	2	4	2	2	10

Total	1st	2nd	3rd	4th	
					Lt
560	122	139	149	150	Thru
10	3	2	4	1	Rt

	Lt	Thru	Rt
1st	4		3
2nd	6		3
3rd	6		3
4th	5		3
Total	21		12

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: EMRERALD RD

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 05:00PM-06:00PM DATE: 08-02-23

NORTH LEG

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

	1st	2nd	3rd	4th	Total
Rt					
Thru	153	140	129	134	556
Lt	0	3	2	0	5

Total	1st	2nd	3rd	4th	
					Lt
573	161	148	133	131	Thru
6	1	3	0	2	Rt

	Lt	Thru	Rt
1st	4		2
2nd	0		0
3rd	1		0
4th	1		1
Total	6		3

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: PHANTOM W
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 10-24-23

PEAK HOUR: 07:45AM

NORTH LEG

TOTAL: 164

Rt	Thru	Lt	
112		52	Total
15		7	1st
29		14	2nd
22		10	3rd
46		21	4th

EAST LEG TOTAL: 517

	1st	2nd	3rd	4th	Total
Rt	30	43	33	38	144
Thru	111	83	88	91	373
Lt					

WEST LEG TOTAL: 502

Total	1st	2nd	3rd	4th	
365	111	91	80	83	Lt
137	31	44	23	39	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.61
SOUTH LEG =
EAST LEG = 0.92
WEST LEG = 0.88

ALL LEGS = 0.93

SOUTH LEG

TOTAL: 0

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

HOUR TOTAL: 1,183

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : PHANTOM W — ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY — 10-24-23

BEGINNING TIME : 07:00AM

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	2	0	0	2
3	0	0	0	0	0	0	0	0	0	0	0	3
12	0	1	2	0	0	0	0	0	1	0	2	18
12	0	7	0	0	0	0	0	0	3	0	0	22
27	0	14	1	0	0	0	0	0	1	0	0	43
20	0	8	0	0	1	0	0	0	2	0	1	32
43	0	21	1	0	0	0	0	0	2	0	0	67
16	0	9	0	0	0	0	0	0	5	0	1	31
133	0	60	4	0	1	0	0	0	16	0	4	218
						SOUTH 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
						EAST LEG						
14	47	0	0	1	0	0	0	0	1	2	0	65
27	66	0	0	1	0	0	0	0	2	2	0	98
35	98	0	0	0	0	0	1	0	1	1	0	136
29	108	0	0	2	0	0	0	0	1	1	0	141
42	81	0	0	0	0	0	0	0	1	2	0	126
31	87	0	0	0	0	0	0	0	2	1	0	121
37	86	0	0	2	0	0	0	0	1	3	0	129
27	67	0	0	0	0	0	2	0	0	3	0	99
242	640	0	0	6	0	0	3	0	9	15	0	915
						WEST LEG						
0	20	31	0	0	1	0	0	0	0	2	2	56
0	37	79	0	2	1	0	1	0	0	1	3	124
0	25	92	0	1	0	0	1	0	0	2	2	123
0	28	107	0	1	0	0	0	0	0	2	4	142
0	43	89	0	0	0	0	0	0	0	1	2	135
0	19	77	0	2	2	0	1	0	0	1	1	103
0	38	80	0	0	0	0	0	0	0	1	3	122
0	48	66	0	2	1	0	0	0	0	2	2	121
0	258	621	0	8	5	0	3	0	0	12	19	926

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: PHANTOM W

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 07:00AM-08:00AM DATE: 10-24-23

NORTH LEG

35		10	Total
2		0	1st
3		0	2nd
15		3	3rd
15		7	4th
Rt	Thru	Lt	

Rt	15	29	36	30	110
Thru	50	69	100	111	330
Lt					
	1st	2nd	3rd	4th	Total

Total	1st	2nd	3rd	4th	
322	34	83	94	111	Lt
123	22	41	29	31	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: PHANTOM W

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 08:00AM-09:00AM DATE: 10-24-23

NORTH LEG

Rt	Thru	Lt	
118		55	Total
29		14	1st
22		10	2nd
46		21	3rd
21		10	4th

	1st	2nd	3rd	4th	Total
Rt	43	33	38	27	141
Thru	83	88	91	72	334
Lt					

Total	1st	2nd	3rd	4th	
323	91	80	83	69	Lt
158	44	23	39	52	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURN COUNT

PEAK HOUR

NORTH-SOUTH STREET: PHANTOM W
EAST-WEST STREET: AIR EXPRESSWAY
JURISDICTION: ADELANTO

DATE: 10-24-23

PEAK HOUR: 04:30PM

NORTH LEG

TOTAL: 343

Rt	Thru	Lt	
245		98	Total
66		22	1st
51		20	2nd
62		31	3rd
66		25	4th

EAST LEG TOTAL: 418

	1st	2nd	3rd	4th	Total
Rt	31	30	37	31	129
Thru	89	60	66	74	289
Lt					

WEST LEG TOTAL: 455

Total	1st	2nd	3rd	4th	
174	42	39	44	49	Lt
281	61	66	73	81	Thru
					Rt

PEAK HOUR FACTORS

NORTH LEG = 0.92
SOUTH LEG =
EAST LEG = 0.87
WEST LEG = 0.88

ALL LEGS = 0.93

SOUTH LEG

TOTAL: 0

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

HOUR TOTAL: 1,216

Prepared by NEWPORT TRAFFIC STUDIES

SANBAG CLASSIFICATION SUMMARY

NORTH-SOUTH STREET : PHANTOM W ADELANTO

EAST-WEST STREET : AIR EXPRESSWAY

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							
35	0	21	0	0	1	0	0	0	1	0	1	59
61	0	39	0	0	1	0	0	0	1	0	1	103
65	0	22	1	0	0	0	0	0	0	0	0	88
47	0	18	1	0	1	0	0	0	3	0	1	71
61	0	30	0	0	0	0	0	0	1	0	1	93
64	0	25	1	0	0	0	0	0	1	0	0	91
21	0	22	0	0	0	0	0	0	2	0	0	45
24	0	16	0	0	0	0	0	0	1	0	1	42
378	0	193	3	0	3	0	0	0	10	0	5	592
					SOUTH 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
					EAST LEG							
16	68	0	0	1	0	0	1	0	0	1	0	87
25	76	0	0	0	0	0	1	0	0	0	0	102
31	86	0	0	2	0	0	0	0	0	1	0	120
29	58	0	1	1	0	0	1	0	0	0	0	90
37	65	0	0	0	0	0	0	0	0	1	0	103
29	71	0	2	2	0	0	0	0	0	1	0	105
28	76	0	1	0	0	0	0	0	0	1	0	106
21	62	0	1	0	0	0	1	0	0	0	0	85
216	562	0	5	6	0	0	4	0	0	5	0	798
					WEST LEG							
0	67	41	0	0	0	0	1	0	0	1	2	112
0	39	33	0	1	0	0	0	0	0	1	0	74
0	59	40	0	1	0	0	0	0	0	1	2	103
0	66	39	0	0	0	0	0	0	0	0	0	105
0	71	43	0	0	1	0	1	0	0	1	0	117
0	77	48	0	2	0	0	1	0	0	1	1	130
0	91	36	0	0	0	0	2	0	0	0	1	130
0	84	44	0	1	0	0	0	0	0	0	1	130
0	554	324	0	5	1	0	5	0	0	5	7	901

Prepared by Newport Traffic Studies

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: PHANTOM W

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 04:00PM-05:00PM DATE: 10-24-23

NORTH LEG

Rt	Thru	Lt	
215		106	Total
36		23	1st
62		41	2nd
66		22	3rd
51		20	4th

	1st	2nd	3rd	4th	Total
Rt	16	25	31	30	102
Thru	71	77	89	60	297
Lt					

Total	1st	2nd	3rd	4th	
157	43	33	42	39	Lt
237	69	41	61	66	Thru
					Rt

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

Prepared by NEWPORT TRAFFIC STUDIES

INTERSECTION TURNING COUNT

NORTH-SOUTH STREET: PHANTOM W

EAST-WEST STREET: AIR EXPRESSWAY

TIME: 05:00PM-06:00PM DATE: 10-24-23

NORTH LEG

176		95	Total
62		31	1st
66		25	2nd
23		22	3rd
25		17	4th
Rt	Thru	Lt	

Rt	37	31	29	22	119
Thru	66	74	77	63	280
Lt					
	1st	2nd	3rd	4th	Total

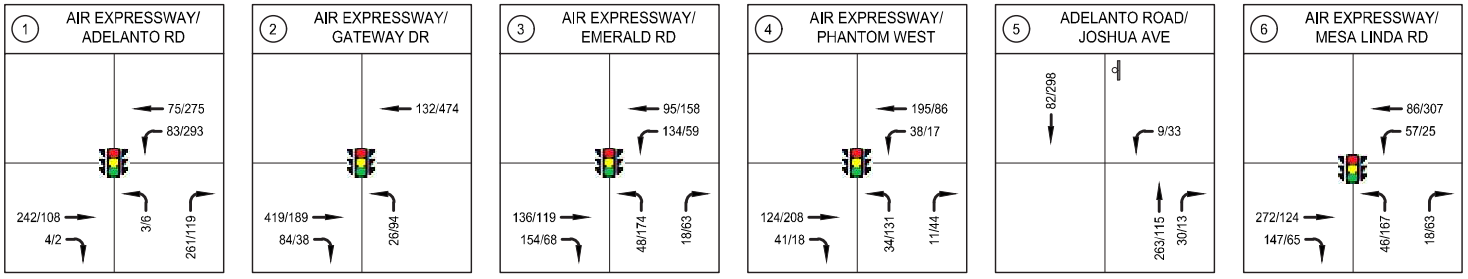
Total	1st	2nd	3rd	4th	
175	44	49	37	45	Lt
332	73	81	93	85	Thru
					Rt

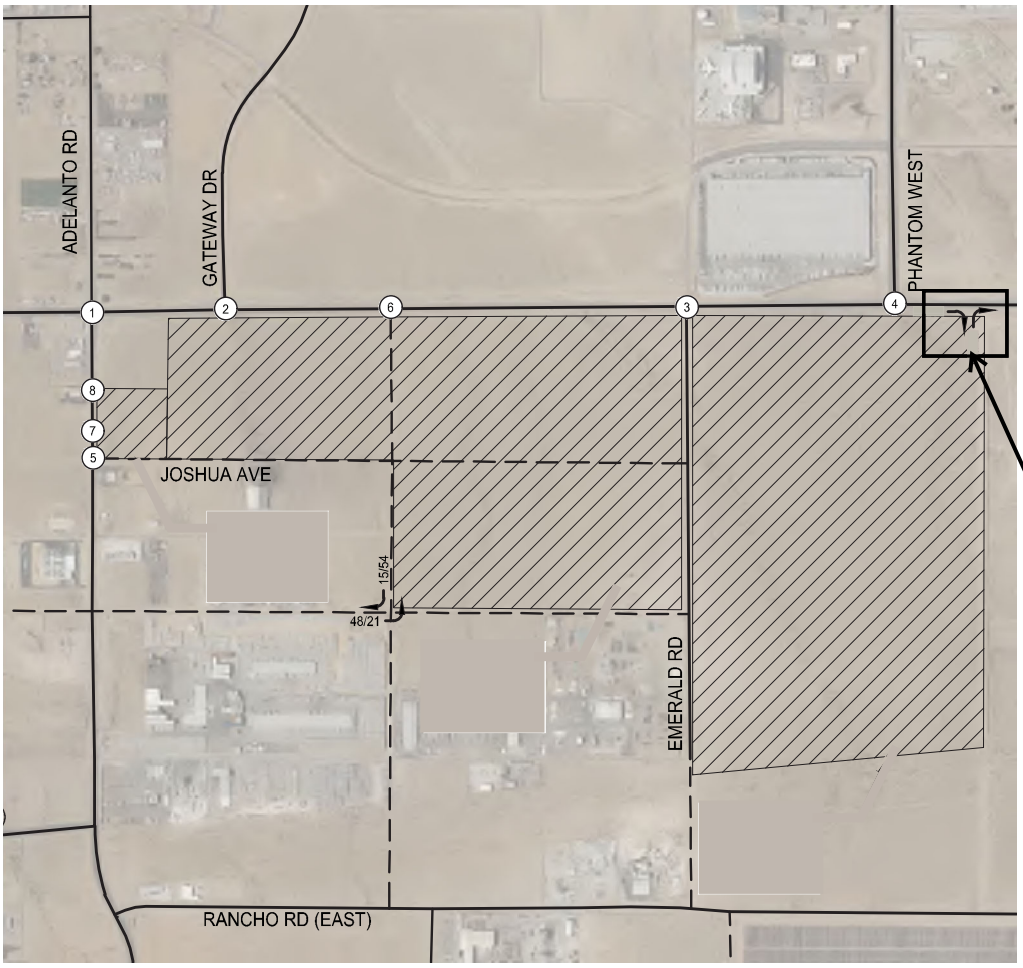
	Lt	Thru	Rt
1st			
2nd			
3rd			
4th			
Total			

Prepared by NEWPORT TRAFFIC STUDIES

DAVID EVANS AND ASSOCIATES INC.

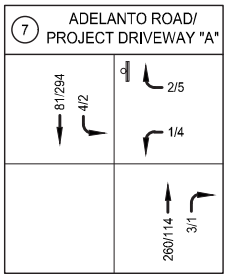
Appendix C: Project Trip Distribution and Assignment Figures

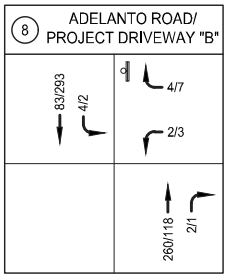


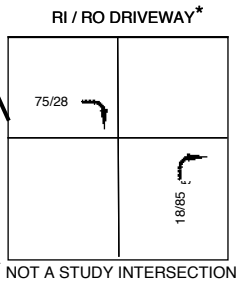


N

NOT TO SCALE







* NOT A STUDY INTERSECTION

TOTAL PROJECT PCE TRIPS

AM PEAK HOUR =769 IN / 231 OUT

PM PEAK HOUR = 338 IN / 868 OUT

LEGEND

XX/XX - AM/PM PROJECT TOTAL TRIPS

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED INTERSECTION

- SIGNAL CONTROLLED INTERSECTION

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT 3-F: PROJECT TOTAL PCE TRIPS

ADELANTO INDUSTRIAL PARK

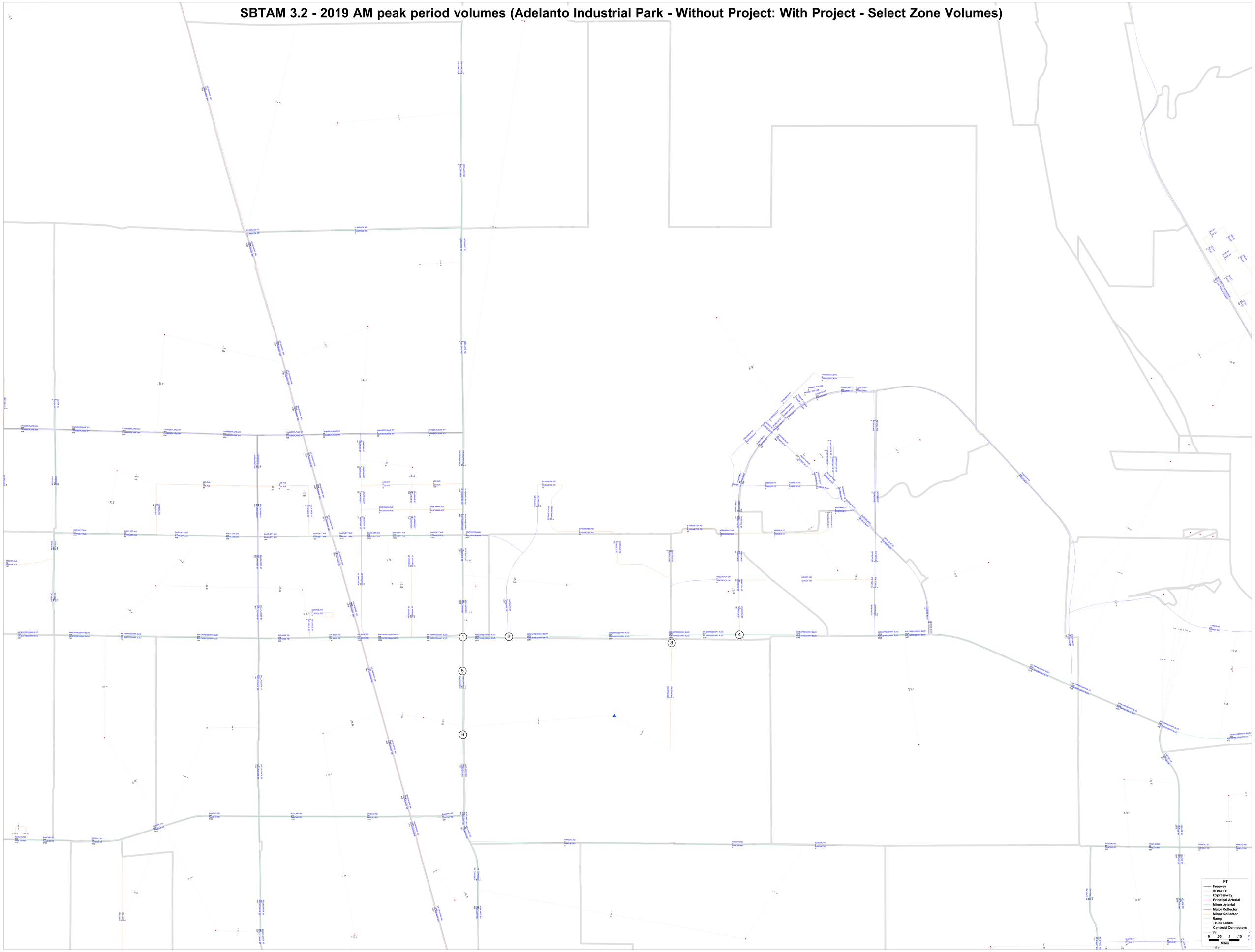
ADELANTO, CA

Drawing Name: P:\MM\KL\TD\000001\tu\400CAD\TIE\EXHIBITS\Study\Exhibit 3.dwg
Last Opened: Jul 11, 2025 - 6:44pm by: Tim

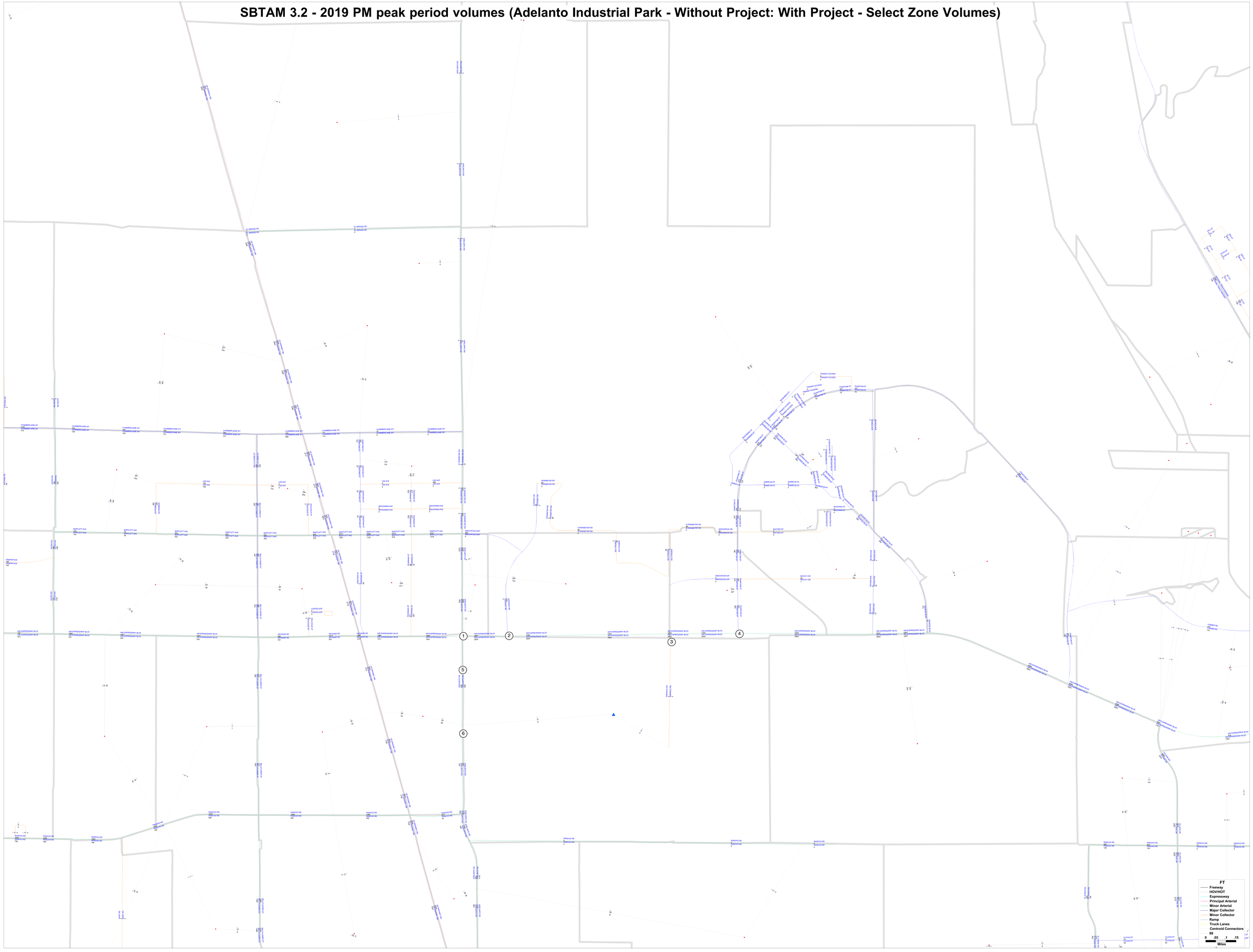
DAVID EVANS AND ASSOCIATES INC.

Appendix D: Forecast Model Volume Development

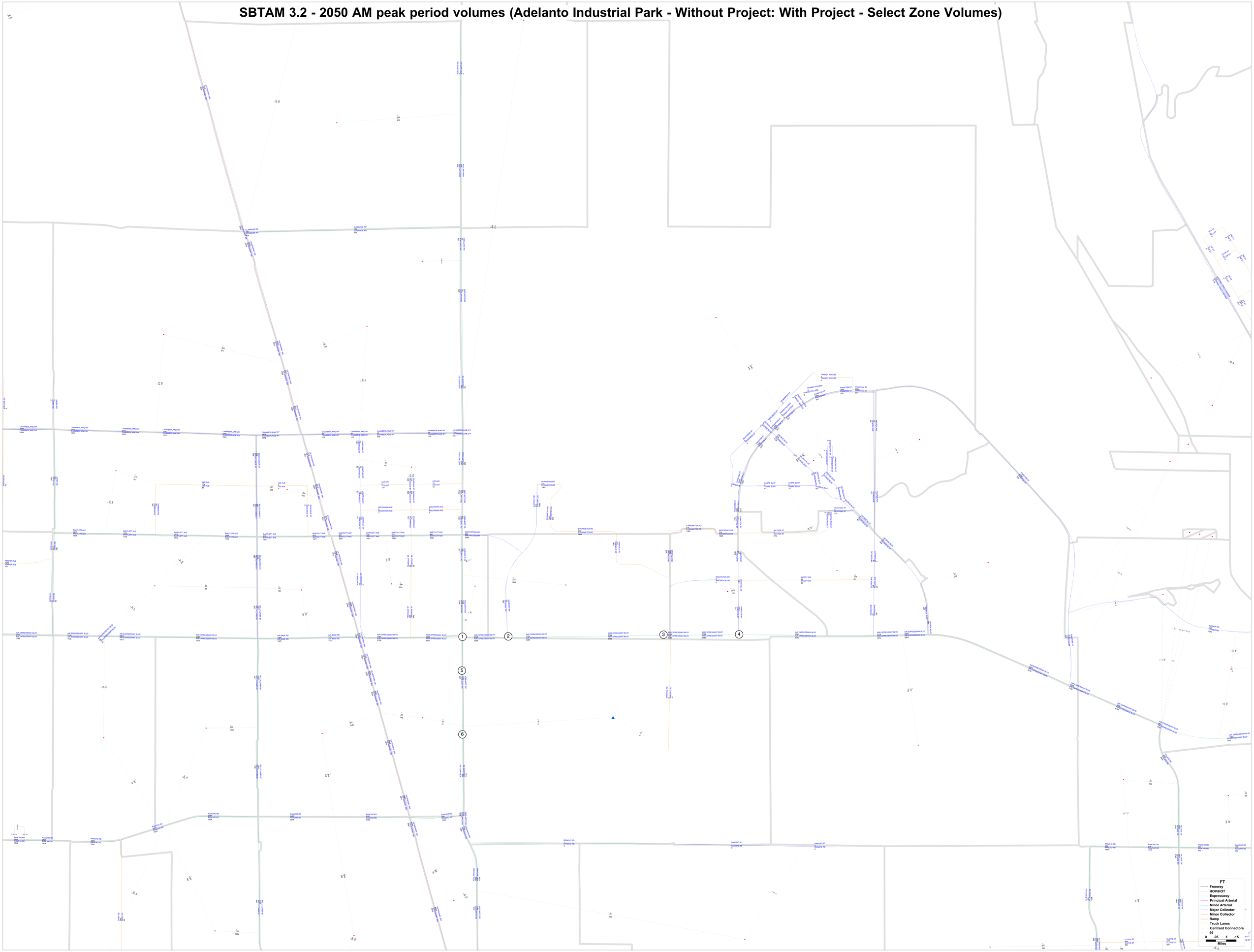
SBTAM 3.2 - 2019 AM peak period volumes (Adelanto Industrial Park - Without Project: With Project - Select Zone Volumes)



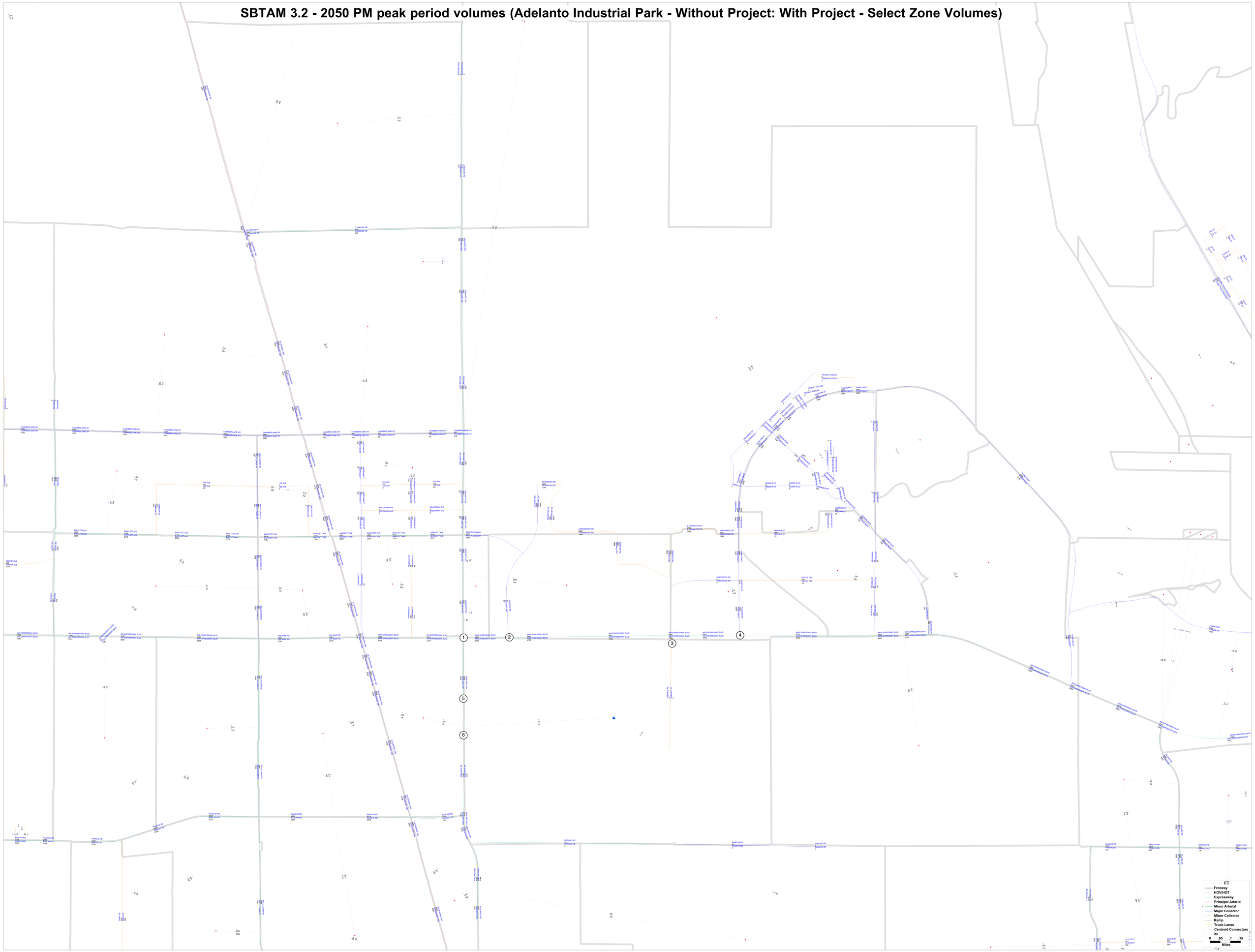
SBTAM 3.2 - 2019 PM peak period volumes (Adelanto Industrial Park - Without Project: With Project - Select Zone Volumes)



SBTAM 3.2 - 2050 AM peak period volumes (Adelanto Industrial Park - Without Project: With Project - Select Zone Volumes)



SBTAM 3.2 - 2050 PM peak period volumes (Adelanto Industrial Park - Without Project: With Project - Select Zone Volumes)



DAVID EVANS AND ASSOCIATES INC.

Appendix E: Intersection Capacity Analysis

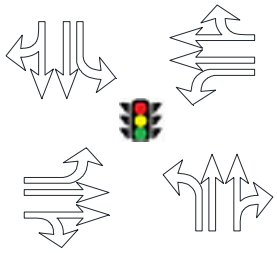
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

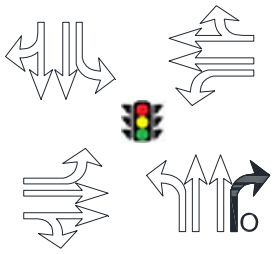
E/W STREET : AIR EXPRESSWAY
N/S STREET : ADELANTO RD
CONDITION : AM PEAK HOUR

INTERSECTION : 1
PROJECTED GROWTH PER YEAR : 3.5%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



FUTURE YEAR 2046 GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
AIR EXPRESSWAY							
EB LEFT	1	0	1	0	1	2	2
EB THRU	581	122	703	242	945	950	1192
EB RIGHT	18	4	22	4	26	11	15
WB LEFT	50	11	61	83	144	53	136
WB THRU	502	105	607	75	682	740	815
WB RIGHT	50	11	61	0	61	170	170
ADELANTO RD							
NB LEFT	34	7	41	3	44	26	29
NB THRU	111	23	134	0	134	192	192
NB RIGHT	172	36	208	261	469	255	516
SB LEFT	12	3	15	0	15	141	141
SB THRU	26	5	31	0	31	110	110
SB RIGHT	8	2	10	0	10	48	48
TOTALS	**1565**	**329**	**1894**	**668**	**2562**	**2698**	**3366**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : ADELANTO RD
CONDITION : AM PEAK HOUR
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
0	5	1	0	0	0	0	0	0	0	0	0
1	6	4	0	0	0	0	0	0	0	0	0
2	3	4	0	1	0	0	0	0	0	0	0
5	8	3	0	0	0	0	1	0	0	0	0

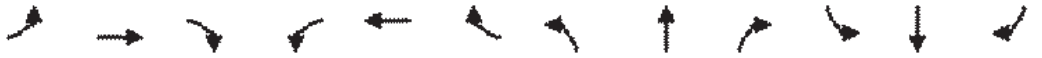
SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
45	24	10	2	0	0	2	0	0	3	0	0
18	33	14	4	0	0	2	0	0	2	1	0
37	31	8	0	0	0	0	0	0	4	0	0
23	18	2	0	0	0	1	1	0	1	0	0

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
3	137	12	1	1	0	0	3	0	1	1	0
1	111	17	1	0	0	0	0	0	1	3	1
4	95	9	2	0	0	0	0	0	1	4	1
27	121	6	0	0	0	0	0	0	0	2	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	124	0	0	3	0	0	1	0	0	7	0
2	112	0	0	2	0	0	1	0	0	4	0
0	127	0	0	1	0	0	0	0	0	6	0
5	139	1	0	2	0	0	0	0	0	4	0

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

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	0	1	**1**	**1**	**1**
EB THRU	31	502	**533**	**581**	**581**
EB RIGHT	0	18	**18**	**18**	**18**
WB LEFT	2	44	**46**	**50**	**50**
WB THRU	14	464	**478**	**502**	**502**
WB RIGHT	7	35	**42**	**50**	**50**
ADELANTO RD					
NB LEFT	0	34	**34**	**34**	**34**
NB THRU	2	106	**108**	**111**	**111**
NB RIGHT	21	123	**144**	**172**	**172**
SB LEFT	0	12	**12**	**12**	**12**
SB THRU	2	22	**24**	**26**	**26**
SB RIGHT	0	8	**8**	**8**	**8**



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	581	18	50	502	50	34	111	172	12	26	8
Future Volume (veh/h)	1	581	18	50	502	50	34	111	172	12	26	8
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	638	20	55	552	55	37	122	189	13	29	9
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	124	1717	54	71	1505	150	48	569	508	76	908	269
Arrive On Green	0.07	0.48	0.48	0.08	0.91	0.91	0.03	0.32	0.32	0.04	0.33	0.33
Sat Flow, veh/h	1882	3573	112	1810	3316	330	1810	1805	1610	1810	2746	812
Grp Volume(v), veh/h	1	322	336	55	300	307	37	122	189	13	19	19
Grp Sat Flow(s),veh/h/ln	1882	1805	1880	1810	1805	1841	1810	1805	1610	1810	1805	1754
Q Serve(g_s), s	0.1	14.7	14.7	3.9	3.0	3.0	2.6	6.5	11.8	0.9	0.9	1.0
Cycle Q Clear(g_c), s	0.1	14.7	14.7	3.9	3.0	3.0	2.6	6.5	11.8	0.9	0.9	1.0
Prop In Lane	1.00		0.06	1.00		0.18	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	124	867	903	71	819	835	48	569	508	76	597	580
V/C Ratio(X)	0.01	0.37	0.37	0.77	0.37	0.37	0.78	0.21	0.37	0.17	0.03	0.03
Avail Cap(c_a), veh/h	124	867	903	181	819	835	84	569	508	111	597	580
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.7	21.4	21.4	59.3	3.4	3.4	62.9	32.7	34.5	60.1	29.4	29.4
Incr Delay (d2), s/veh	0.0	1.2	1.2	15.9	1.2	1.2	23.0	0.9	2.1	1.1	0.1	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	0.0	6.1	6.3	2.0	1.1	1.1	1.5	2.9	4.9	0.4	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.8	22.6	22.5	75.2	4.7	4.6	85.9	33.5	36.6	61.2	29.5	29.5
LnGrp LOS	E	C	C	E	A	A	F	C	D	E	C	C
Approach Vol, veh/h		659			662			348			51	
Approach Delay, s/veh		22.6			10.5			40.8			37.6	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	66.5	7.4	47.0	12.6	63.0	9.4	45.0
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	13.0	52.0	6.0	43.0	6.0	59.0	8.0	41.0
Max Q Clear Time (g_c+I1), s	5.9	16.7	4.6	3.0	2.1	5.0	2.9	13.8
Green Ext Time (p_c), s	0.0	3.6	0.0	0.2	0.0	3.3	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	22.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	703	22	61	607	61	41	134	208	15	31	10
Future Volume (veh/h)	1	703	22	61	607	61	41	134	208	15	31	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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	773	24	67	667	67	45	147	229	16	34	11
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	113	1668	52	86	1503	151	58	569	508	86	899	277
Arrive On Green	0.06	0.47	0.47	0.09	0.91	0.91	0.03	0.32	0.32	0.05	0.33	0.33
Sat Flow, veh/h	1882	3574	111	1810	3313	332	1810	1805	1610	1810	2717	837
Grp Volume(v), veh/h	1	390	407	67	363	371	45	147	229	16	22	23
Grp Sat Flow(s),veh/h/ln	1882	1805	1880	1810	1805	1840	1810	1805	1610	1810	1805	1749
Q Serve(g_s), s	0.1	19.1	19.1	4.7	4.0	4.1	3.2	7.9	14.8	1.1	1.1	1.2
Cycle Q Clear(g_c), s	0.1	19.1	19.1	4.7	4.0	4.1	3.2	7.9	14.8	1.1	1.1	1.2
Prop In Lane	1.00		0.06	1.00		0.18	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	113	842	877	86	819	835	58	569	508	86	597	579
V/C Ratio(X)	0.01	0.46	0.46	0.78	0.44	0.44	0.77	0.26	0.45	0.19	0.04	0.04
Avail Cap(c_a), veh/h	113	842	877	181	819	835	84	569	508	111	597	579
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	23.6	23.6	58.2	3.5	3.5	62.4	33.2	35.5	59.5	29.5	29.5
Incr Delay (d2), s/veh	0.0	1.8	1.8	13.7	1.7	1.6	23.6	1.1	2.9	1.0	0.1	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	0.0	8.0	8.3	2.3	1.4	1.4	1.8	3.6	6.1	0.5	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.5	25.4	25.4	71.9	5.1	5.1	86.0	34.3	38.4	60.5	29.6	29.6
LnGrp LOS	E	C	C	E	A	A	F	C	D	E	C	C
Approach Vol, veh/h		798			801			421			61	
Approach Delay, s/veh		25.4			10.7			42.0			37.7	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	64.7	8.2	47.0	11.8	63.0	10.2	45.0
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	13.0	52.0	6.0	43.0	6.0	59.0	8.0	41.0
Max Q Clear Time (g_c+I1), s	6.7	21.1	5.2	3.2	2.1	6.1	3.1	16.8
Green Ext Time (p_c), s	0.1	4.5	0.0	0.2	0.0	4.2	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	23.5
HCM 6th LOS	C

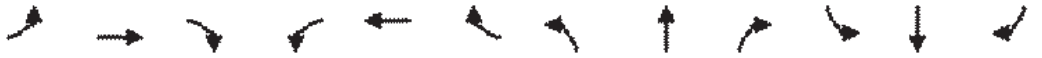
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	945	26	144	682	61	44	134	469	15	31	10
Future Volume (veh/h)	1	945	26	144	682	61	44	134	469	15	31	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	995	27	152	718	64	46	141	494	16	33	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	2	1462	40	178	1691	151	60	597	533	74	913	289
Arrive On Green	0.00	0.41	0.41	0.10	0.50	0.50	0.03	0.33	0.33	0.04	0.34	0.34
Sat Flow, veh/h	1882	3590	97	1810	3353	299	1810	1805	1610	1810	2697	855
Grp Volume(v), veh/h	1	500	522	152	386	396	46	141	494	16	22	22
Grp Sat Flow(s),veh/h/ln	1882	1805	1882	1810	1805	1846	1810	1805	1610	1810	1805	1746
Q Serve(g_s), s	0.1	29.5	29.5	10.8	17.5	17.6	3.3	7.4	38.5	1.1	1.0	1.1
Cycle Q Clear(g_c), s	0.1	29.5	29.5	10.8	17.5	17.6	3.3	7.4	38.5	1.1	1.0	1.1
Prop In Lane	1.00		0.05	1.00		0.16	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	2	735	767	178	910	931	60	597	533	74	611	591
V/C Ratio(X)	0.49	0.68	0.68	0.86	0.42	0.42	0.77	0.24	0.93	0.22	0.04	0.04
Avail Cap(c_a), veh/h	87	735	767	209	910	931	125	597	533	139	611	591
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	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	31.6	31.6	57.7	20.3	20.3	62.4	31.6	42.0	60.4	28.8	28.8
Incr Delay (d2), s/veh	118.7	5.0	4.8	23.8	1.4	1.3	18.5	0.9	24.6	1.5	0.1	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	0.1	13.1	13.6	5.9	7.2	7.3	1.8	3.3	18.5	0.5	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	183.6	36.6	36.4	81.5	21.7	21.7	80.9	32.5	66.6	61.8	28.9	28.9
LnGrp LOS	F	D	D	F	C	C	F	C	E	E	C	C
Approach Vol, veh/h		1023			934			681			60	
Approach Delay, s/veh		36.7			31.4			60.5			37.7	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	56.9	8.3	48.0	4.1	69.6	9.3	47.0
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	15.0	46.0	9.0	44.0	6.0	55.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	12.8	31.5	5.3	3.1	2.1	19.6	3.1	40.5
Green Ext Time (p_c), s	0.1	4.9	0.0	0.2	0.0	4.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	40.9
HCM 6th LOS	D

Notes

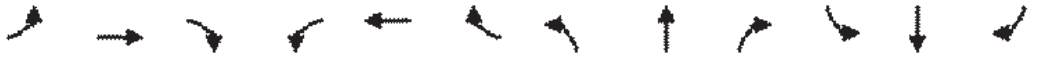
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	950	11	53	740	170	26	192	255	141	110	48
Future Volume (veh/h)	2	950	11	53	740	170	26	192	255	141	110	48
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1000	12	56	779	179	27	202	268	148	116	51
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	340	1293	16	452	1233	283	367	354	316	139	175	73
Arrive On Green	0.18	0.35	0.35	0.08	0.14	0.14	0.20	0.20	0.20	0.08	0.07	0.07
Sat Flow, veh/h	1882	3653	44	1810	2915	670	1810	1805	1610	1810	2481	1037
Grp Volume(v), veh/h	2	494	518	56	482	476	27	202	268	148	83	84
Grp Sat Flow(s),veh/h/ln	1882	1805	1892	1810	1805	1779	1810	1805	1610	1810	1805	1713
Q Serve(g_s), s	0.1	31.7	31.7	3.7	32.8	32.8	1.6	13.2	20.9	10.0	5.8	6.2
Cycle Q Clear(g_c), s	0.1	31.7	31.7	3.7	32.8	32.8	1.6	13.2	20.9	10.0	5.8	6.2
Prop In Lane	1.00		0.02	1.00		0.38	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	340	639	670	452	764	753	367	354	316	139	127	121
V/C Ratio(X)	0.01	0.77	0.77	0.12	0.63	0.63	0.07	0.57	0.85	1.06	0.65	0.70
Avail Cap(c_a), veh/h	340	639	670	452	764	753	367	597	533	139	611	580
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	37.4	37.4	46.4	46.4	46.4	41.9	47.3	50.4	60.0	58.9	59.1
Incr Delay (d2), s/veh	0.0	8.9	8.5	0.1	3.6	3.7	0.1	1.4	6.4	94.2	5.5	7.1
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	0.1	14.7	15.4	1.7	16.5	16.3	0.7	6.0	8.8	8.2	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.7	46.2	45.8	46.6	50.0	50.1	42.0	48.7	56.8	154.2	64.4	66.2
LnGrp LOS	D	D	D	D	D	D	D	D	E	F	E	E
Approach Vol, veh/h		1014			1014			497			315	
Approach Delay, s/veh		46.0			49.8			52.7			107.0	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	50.0	30.4	13.2	27.5	59.0	14.0	29.5
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	15.0	46.0	9.0	44.0	6.0	55.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	5.7	33.7	3.6	8.2	2.1	34.8	12.0	22.9
Green Ext Time (p_c), s	0.1	4.4	0.0	0.9	0.0	5.3	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	55.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1192	15	136	815	170	29	192	516	141	110	48
Future Volume (veh/h)	2	1192	15	136	815	170	29	192	516	141	110	48
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1255	16	143	858	179	31	202	543	148	116	51
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	4	1372	17	169	1389	290	125	597	533	139	840	351
Arrive On Green	0.00	0.38	0.38	0.09	0.47	0.47	0.07	0.33	0.33	0.08	0.34	0.34
Sat Flow, veh/h	1882	3650	47	1810	2973	620	1810	1805	1610	1810	2481	1037
Grp Volume(v), veh/h	2	620	651	143	521	516	31	202	543	148	83	84
Grp Sat Flow(s),veh/h/ln	1882	1805	1892	1810	1805	1788	1810	1805	1610	1810	1805	1713
Q Serve(g_s), s	0.1	42.5	42.5	10.1	28.1	28.1	2.1	11.0	43.0	10.0	4.1	4.4
Cycle Q Clear(g_c), s	0.1	42.5	42.5	10.1	28.1	28.1	2.1	11.0	43.0	10.0	4.1	4.4
Prop In Lane	1.00		0.02	1.00		0.35	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	4	679	711	169	843	835	125	597	533	139	611	580
V/C Ratio(X)	0.50	0.91	0.91	0.85	0.62	0.62	0.25	0.34	1.02	1.06	0.14	0.15
Avail Cap(c_a), veh/h	87	679	711	209	843	835	125	597	533	139	611	580
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	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	38.6	38.6	58.0	25.9	25.9	57.3	32.8	43.5	60.0	29.8	29.9
Incr Delay (d2), s/veh	71.9	19.0	18.4	20.7	3.1	3.1	1.0	1.5	44.0	94.2	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	21.1	22.0	5.4	11.9	11.8	1.0	5.0	23.1	8.2	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	136.7	57.6	57.0	78.7	29.0	29.0	58.3	34.3	87.5	154.2	30.3	30.4
LnGrp LOS	F	E	E	E	C	C	E	C	F	F	C	C
Approach Vol, veh/h		1273			1180			776			315	
Approach Delay, s/veh		57.4			35.0			72.5			88.5	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	52.9	13.0	48.0	4.3	64.7	14.0	47.0
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	15.0	46.0	9.0	44.0	6.0	55.0	10.0	43.0
Max Q Clear Time (g_c+I1), s	12.1	44.5	4.1	6.4	2.1	30.1	12.0	45.0
Green Ext Time (p_c), s	0.1	1.0	0.0	0.9	0.0	6.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	56.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1192	15	136	815	170	29	192	516	141	110	48
Future Volume (veh/h)	2	1192	15	136	815	170	29	192	516	141	110	48
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1255	16	143	858	179	31	202	543	148	116	51
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	4	1570	20	169	1550	323	512	942	571	167	175	73
Arrive On Green	0.00	0.43	0.43	0.09	0.52	0.52	0.28	0.26	0.26	0.09	0.07	0.07
Sat Flow, veh/h	1882	3650	47	1810	2973	620	1810	3610	1610	1810	2481	1037
Grp Volume(v), veh/h	2	620	651	143	521	516	31	202	543	148	83	84
Grp Sat Flow(s),veh/h/ln	1882	1805	1892	1810	1805	1788	1810	1805	1610	1810	1805	1713
Q Serve(g_s), s	0.1	38.8	38.8	10.1	25.2	25.2	1.6	5.7	30.5	10.5	5.8	6.2
Cycle Q Clear(g_c), s	0.1	38.8	38.8	10.1	25.2	25.2	1.6	5.7	30.5	10.5	5.8	6.2
Prop In Lane	1.00		0.02	1.00		0.35	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	4	776	814	169	941	932	512	942	571	167	127	121
V/C Ratio(X)	0.50	0.80	0.80	0.85	0.55	0.55	0.06	0.21	0.95	0.89	0.65	0.70
Avail Cap(c_a), veh/h	87	776	814	223	941	932	512	1027	609	167	597	567
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	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	32.2	32.2	58.0	20.9	20.9	34.0	37.6	22.3	58.3	58.9	59.1
Incr Delay (d2), s/veh	71.9	8.4	8.1	18.2	2.1	2.1	0.0	0.1	24.3	39.1	5.5	7.1
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	0.1	17.5	18.3	5.3	10.3	10.2	0.7	2.5	14.7	6.6	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	136.7	40.6	40.3	76.2	23.0	23.1	34.0	37.7	46.6	97.4	64.4	66.2
LnGrp LOS	F	D	D	E	C	C	C	D	D	F	E	E
Approach Vol, veh/h		1273			1180			776			315	
Approach Delay, s/veh		40.6			29.5			43.8			80.4	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	59.9	40.8	13.1	4.3	71.8	16.0	37.9
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	16.0	49.0	6.0	43.0	6.0	59.0	12.0	37.0
Max Q Clear Time (g_c+I1), s	12.1	40.8	3.6	8.2	2.1	27.2	12.5	32.5
Green Ext Time (p_c), s	0.1	4.4	0.0	0.9	0.0	6.6	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	41.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : ADELANTO RD
CONDITION : PM PEAK HOUR

INTERSECTION : 1
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
AIR EXPRESSWAY							
EB LEFT	1	0	1	0	1	5	5
EB THRU	611	128	739	108	847	970	1078
EB RIGHT	18	4	22	2	24	30	32
WB LEFT	112	24	136	293	429	203	496
WB THRU	627	132	759	275	1034	984	1259
WB RIGHT	15	3	18	0	18	67	67
ADELANTO RD							
NB LEFT	19	4	23	6	29	20	26
NB THRU	57	12	69	0	69	163	163
NB RIGHT	147	31	178	119	297	164	283
SB LEFT	28	6	34	0	34	51	51
SB THRU	66	14	80	0	80	124	124
SB RIGHT	2	0	2	0	2	4	4
TOTALS	**1703**	**358**	**2061**	**803**	**2864**	**2785**	**3588**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2	OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : ADELANTO RD
CONDITION : PM PEAK HOUR
PHF : 0.83

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
2	24	9	0	0	0	0	0	0	0	0	0
0	16	10	0	0	0	0	0	0	0	1	0
0	7	2	0	1	0	0	0	0	0	0	0
0	14	7	0	0	0	0	0	0	0	0	0

SOUTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
66	17	10	0	0	0	0	0	0	0	0	0
16	13	1	0	0	0	0	0	0	2	0	0
24	16	2	0	0	0	1	0	0	2	0	0
24	11	6	0	0	0	0	0	0	1	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
7	155	31	0	1	0	0	0	0	1	1	0
1	154	21	0	2	0	1	0	0	0	2	0
0	139	40	1	0	0	0	0	0	0	6	0
0	129	20	0	0	0	0	0	0	0	6	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
2	160	0	0	0	0	0	1	0	0	3	0
6	131	0	0	2	0	0	0	0	2	2	0
1	137	0	0	0	0	0	0	0	0	2	0
3	145	0	0	0	0	0	0	0	0	4	0

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

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	0	0	**0**	**1**	**1**
EB THRU	14	573	**587**	**611**	**611**
EB RIGHT	2	12	**14**	**18**	**18**
WB LEFT	0	112	**112**	**112**	**112**
WB THRU	18	577	**595**	**627**	**627**
WB RIGHT	3	8	**11**	**15**	**15**
ADELANTO RD					
NB LEFT	0	19	**19**	**19**	**19**
NB THRU	0	57	**57**	**57**	**57**
NB RIGHT	6	130	**136**	**147**	**147**
SB LEFT	0	28	**28**	**28**	**28**
SB THRU	2	61	**63**	**66**	**66**
SB RIGHT	0	2	**2**	**2**	**2**



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	611	18	112	627	15	19	57	147	28	66	2
Future Volume (veh/h)	1	611	18	112	627	15	19	57	147	28	66	2
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	736	22	135	755	18	23	69	177	34	80	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	172	1635	49	159	1635	39	31	555	495	44	1132	28
Arrive On Green	0.09	0.46	0.46	0.18	0.91	0.91	0.02	0.31	0.31	0.02	0.31	0.31
Sat Flow, veh/h	1882	3579	107	1810	3604	86	1810	1805	1610	1810	3599	90
Grp Volume(v), veh/h	1	371	387	135	378	395	23	69	177	34	40	42
Grp Sat Flow(s),veh/h/ln	1882	1805	1881	1810	1805	1885	1810	1805	1610	1810	1805	1884
Q Serve(g_s), s	0.1	18.3	18.3	9.4	4.3	4.3	1.6	3.6	11.1	2.4	2.0	2.0
Cycle Q Clear(g_c), s	0.1	18.3	18.3	9.4	4.3	4.3	1.6	3.6	11.1	2.4	2.0	2.0
Prop In Lane	1.00		0.06	1.00		0.05	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	172	825	859	159	819	855	31	555	495	44	568	592
V/C Ratio(X)	0.01	0.45	0.45	0.85	0.46	0.46	0.73	0.12	0.36	0.78	0.07	0.07
Avail Cap(c_a), veh/h	172	825	859	251	819	855	181	555	495	125	568	592
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	24.1	24.1	52.7	3.5	3.5	63.6	32.4	35.0	63.1	31.2	31.2
Incr Delay (d2), s/veh	0.0	1.8	1.7	14.1	1.8	1.8	27.5	0.5	2.0	24.9	0.2	0.2
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	0.0	7.7	8.0	4.4	1.5	1.5	1.0	1.6	4.6	1.4	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.7	25.9	25.8	66.8	5.3	5.2	91.1	32.9	37.0	88.0	31.5	31.5
LnGrp LOS	D	C	C	E	A	A	F	C	D	F	C	C
Approach Vol, veh/h		759			908			269			116	
Approach Delay, s/veh		25.9			14.4			40.6			48.0	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	63.4	6.3	44.9	15.9	63.0	7.1	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	18.0	47.0	13.0	36.0	6.0	59.0	9.0	40.0
Max Q Clear Time (g_c+I1), s	11.4	20.3	3.6	4.0	2.1	6.3	4.4	13.1
Green Ext Time (p_c), s	0.2	4.1	0.0	0.4	0.0	4.5	0.0	1.4

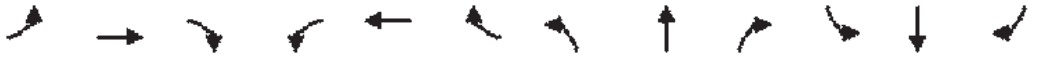
Intersection Summary	
HCM 6th Ctrl Delay, s/veh	24.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	739	22	136	759	18	23	69	178	34	80	2
Future Volume (veh/h)	1	739	22	136	759	18	23	69	178	34	80	2
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	890	27	164	914	22	28	83	214	41	96	2
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	1559	47	188	1635	39	36	555	495	53	1148	24
Arrive On Green	0.09	0.44	0.44	0.21	0.91	0.91	0.02	0.31	0.31	0.03	0.32	0.32
Sat Flow, veh/h	1882	3577	109	1810	3603	87	1810	1805	1610	1810	3616	75
Grp Volume(v), veh/h	1	449	468	164	458	478	28	83	214	41	48	50
Grp Sat Flow(s),veh/h/ln	1882	1805	1880	1810	1805	1884	1810	1805	1610	1810	1805	1886
Q Serve(g_s), s	0.1	24.3	24.3	11.4	6.2	6.2	2.0	4.3	13.8	2.9	2.4	2.4
Cycle Q Clear(g_c), s	0.1	24.3	24.3	11.4	6.2	6.2	2.0	4.3	13.8	2.9	2.4	2.4
Prop In Lane	1.00		0.06	1.00		0.05	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	162	787	820	188	819	855	36	555	495	53	573	599
V/C Ratio(X)	0.01	0.57	0.57	0.87	0.56	0.56	0.79	0.15	0.43	0.77	0.08	0.08
Avail Cap(c_a), veh/h	162	787	820	251	819	855	181	555	495	125	573	599
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	27.5	27.5	50.6	3.6	3.6	63.4	32.7	35.9	62.7	31.1	31.1
Incr Delay (d2), s/veh	0.0	3.0	2.9	21.0	2.6	2.5	30.5	0.6	2.7	20.6	0.3	0.3
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	0.0	10.4	10.8	5.6	1.9	1.9	1.2	2.0	5.7	1.6	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.3	30.5	30.4	71.6	6.2	6.1	94.0	33.2	38.7	83.3	31.4	31.4
LnGrp LOS	D	C	C	E	A	A	F	C	D	F	C	C
Approach Vol, veh/h		918			1100			325			139	
Approach Delay, s/veh		30.5			15.9			42.0			46.7	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	60.7	6.6	45.3	15.2	63.0	7.8	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	18.0	47.0	13.0	36.0	6.0	59.0	9.0	40.0
Max Q Clear Time (g_c+I1), s	13.4	26.3	4.0	4.4	2.1	8.2	4.9	15.8
Green Ext Time (p_c), s	0.2	4.9	0.0	0.5	0.0	5.8	0.0	1.7

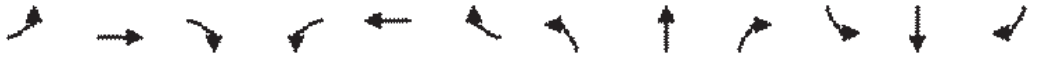
Intersection Summary	
HCM 6th Ctrl Delay, s/veh	26.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	847	24	429	1034	18	29	69	297	34	80	2
Future Volume (veh/h)	1	847	24	429	1034	18	29	69	297	34	80	2
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1	892	25	452	1088	19	31	73	313	36	84	2
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	126	1122	31	459	1815	32	40	514	458	46	1039	25
Arrive On Green	0.07	0.31	0.31	0.25	0.50	0.50	0.02	0.28	0.28	0.03	0.29	0.29
Sat Flow, veh/h	1882	3586	101	1810	3630	63	1810	1805	1610	1810	3604	86
Grp Volume(v), veh/h	1	449	468	452	541	566	31	73	313	36	42	44
Grp Sat Flow(s),veh/h/ln	1882	1805	1882	1810	1805	1889	1810	1805	1610	1810	1805	1885
Q Serve(g_s), s	0.1	29.6	29.6	32.3	27.8	27.8	2.2	3.9	22.4	2.6	2.2	2.2
Cycle Q Clear(g_c), s	0.1	29.6	29.6	32.3	27.8	27.8	2.2	3.9	22.4	2.6	2.2	2.2
Prop In Lane	1.00		0.05	1.00		0.03	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	126	565	589	459	903	944	40	514	458	46	520	543
V/C Ratio(X)	0.01	0.79	0.80	0.98	0.60	0.60	0.78	0.14	0.68	0.78	0.08	0.08
Avail Cap(c_a), veh/h	126	565	589	459	903	944	84	514	458	84	520	543
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	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	40.9	40.9	48.2	23.2	23.2	63.3	34.7	41.3	63.0	33.7	33.7
Incr Delay (d2), s/veh	0.0	11.0	10.6	33.6	2.4	2.3	27.7	0.6	8.0	23.7	0.3	0.3
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	0.0	14.2	14.7	18.1	11.4	12.0	1.3	1.8	9.8	1.5	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.7	51.9	51.5	81.8	25.6	25.5	91.0	35.2	49.3	86.6	34.0	34.0
LnGrp LOS	E	D	D	F	C	C	F	D	D	F	C	C
Approach Vol, veh/h		918			1559			417			122	
Approach Delay, s/veh		51.7			41.9			49.9			49.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	44.7	6.8	41.5	12.7	69.0	7.3	41.0
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	33.0	38.0	6.0	37.0	6.0	65.0	6.0	37.0
Max Q Clear Time (g_c+I1), s	34.3	31.6	4.2	4.2	2.1	29.8	4.6	24.4
Green Ext Time (p_c), s	0.0	2.6	0.0	0.4	0.0	7.1	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	46.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	970	30	203	984	67	20	163	164	51	124	4
Future Volume (veh/h)	5	970	30	203	984	67	20	163	164	51	124	4
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1021	32	214	1036	71	21	172	173	54	131	4
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	87	1044	33	732	2230	153	215	242	216	84	220	7
Arrive On Green	0.05	0.29	0.29	0.13	0.21	0.21	0.12	0.13	0.13	0.05	0.06	0.06
Sat Flow, veh/h	1882	3573	112	1810	3428	235	1810	1805	1610	1810	3577	109
Grp Volume(v), veh/h	5	516	537	214	545	562	21	172	173	54	66	69
Grp Sat Flow(s),veh/h/ln	1882	1805	1880	1810	1805	1858	1810	1805	1610	1810	1805	1880
Q Serve(g_s), s	0.3	36.8	36.8	13.9	34.3	34.3	1.3	11.9	13.6	3.8	4.6	4.7
Cycle Q Clear(g_c), s	0.3	36.8	36.8	13.9	34.3	34.3	1.3	11.9	13.6	3.8	4.6	4.7
Prop In Lane	1.00		0.06	1.00		0.13	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	87	528	549	732	1174	1209	215	242	216	84	111	116
V/C Ratio(X)	0.06	0.98	0.98	0.29	0.46	0.46	0.10	0.71	0.80	0.65	0.59	0.60
Avail Cap(c_a), veh/h	87	528	549	732	1174	1209	215	514	458	84	514	535
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	45.6	45.6	39.6	31.3	31.3	51.1	53.9	54.6	61.0	59.4	59.4
Incr Delay (d2), s/veh	1.3	34.0	33.3	0.9	1.2	1.2	0.9	3.8	6.8	32.7	5.0	4.9
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	20.5	21.3	6.8	16.8	17.3	0.7	5.6	5.8	2.5	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.6	79.6	78.8	40.5	32.5	32.5	52.0	57.7	61.4	93.7	64.4	64.3
LnGrp LOS	E	E	E	D	C	C	D	E	E	F	E	E
Approach Vol, veh/h		1058			1321			366			189	
Approach Delay, s/veh		79.1			33.8			59.1			72.7	
Approach LOS		E			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	56.6	42.0	19.4	12.0	10.0	88.6	10.0	21.4
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	33.0	38.0	6.0	37.0	6.0	65.0	6.0	37.0
Max Q Clear Time (g_c+I1), s	15.9	38.8	3.3	6.7	2.3	36.3	5.8	15.6
Green Ext Time (p_c), s	0.5	0.0	0.0	0.7	0.0	6.9	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	55.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1078	32	496	1259	67	26	163	283	51	124	4
Future Volume (veh/h)	5	1078	32	496	1259	67	26	163	283	51	124	4
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1135	34	522	1325	71	27	172	298	54	131	4
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	101	1073	32	459	1743	93	35	514	458	70	1087	33
Arrive On Green	0.05	0.30	0.30	0.25	0.50	0.50	0.02	0.28	0.28	0.04	0.30	0.30
Sat Flow, veh/h	1882	3579	107	1810	3485	186	1810	1805	1610	1810	3577	109
Grp Volume(v), veh/h	5	572	597	522	685	711	27	172	298	54	66	69
Grp Sat Flow(s),veh/h/ln	1882	1805	1881	1810	1805	1866	1810	1805	1610	1810	1805	1880
Q Serve(g_s), s	0.3	39.0	39.0	33.0	39.8	40.0	1.9	9.8	21.1	3.8	3.4	3.5
Cycle Q Clear(g_c), s	0.3	39.0	39.0	33.0	39.8	40.0	1.9	9.8	21.1	3.8	3.4	3.5
Prop In Lane	1.00		0.06	1.00		0.10	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	101	541	564	459	903	933	35	514	458	70	549	572
V/C Ratio(X)	0.05	1.06	1.06	1.14	0.76	0.76	0.78	0.33	0.65	0.77	0.12	0.12
Avail Cap(c_a), veh/h	101	541	564	459	903	933	84	514	458	84	549	572
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	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	45.5	45.5	48.5	26.2	26.2	63.5	36.8	40.8	61.9	32.7	32.7
Incr Delay (d2), s/veh	0.2	54.7	54.1	77.9	3.9	3.8	30.3	1.8	7.0	30.3	0.4	0.4
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	0.2	24.7	25.6	24.0	16.5	17.1	1.2	4.5	9.1	2.3	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.6	100.2	99.6	126.4	30.1	30.1	93.7	38.5	47.8	92.2	33.1	33.1
LnGrp LOS	E	F	F	F	C	C	F	D	D	F	C	C
Approach Vol, veh/h		1174			1918			497			189	
Approach Delay, s/veh		99.7			56.3			47.1			50.0	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	43.0	6.5	43.5	11.0	69.0	9.0	41.0
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	33.0	38.0	6.0	37.0	6.0	65.0	6.0	37.0
Max Q Clear Time (g_c+I1), s	35.0	41.0	3.9	5.5	2.3	42.0	5.8	23.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	9.0	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	68.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1078	32	496	1259	67	26	163	283	51	124	4
Future Volume (veh/h)	5	1078	32	496	1259	67	26	163	283	51	124	4
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	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1135	34	522	1325	71	27	172	298	54	131	4
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	331	1511	45	459	1743	93	35	586	670	70	650	20
Arrive On Green	0.18	0.42	0.42	0.25	0.50	0.50	0.02	0.16	0.16	0.04	0.18	0.18
Sat Flow, veh/h	1882	3579	107	1810	3485	186	1810	3610	1610	1810	3577	109
Grp Volume(v), veh/h	5	572	597	522	685	711	27	172	298	54	66	69
Grp Sat Flow(s),veh/h/ln	1882	1805	1881	1810	1805	1866	1810	1805	1610	1810	1805	1880
Q Serve(g_s), s	0.3	34.9	34.9	33.0	39.8	40.0	1.9	5.4	17.2	3.8	4.0	4.1
Cycle Q Clear(g_c), s	0.3	34.9	34.9	33.0	39.8	40.0	1.9	5.4	17.2	3.8	4.0	4.1
Prop In Lane	1.00		0.06	1.00		0.10	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	331	762	794	459	903	933	35	586	670	70	328	342
V/C Ratio(X)	0.02	0.75	0.75	1.14	0.76	0.76	0.78	0.29	0.44	0.77	0.20	0.20
Avail Cap(c_a), veh/h	331	762	794	459	903	933	84	1027	867	84	514	535
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	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.2	31.8	31.8	48.5	26.2	26.2	63.5	47.9	27.2	61.9	45.2	45.2
Incr Delay (d2), s/veh	0.0	6.7	6.5	77.9	3.9	3.8	30.3	0.3	0.5	30.3	0.3	0.3
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	0.1	15.6	16.2	24.0	16.5	17.1	1.2	2.5	6.6	2.3	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.3	38.5	38.3	126.4	30.1	30.1	93.7	48.2	27.7	92.2	45.5	45.5
LnGrp LOS	D	D	D	F	C	C	F	D	C	F	D	D
Approach Vol, veh/h		1174			1918			497			189	
Approach Delay, s/veh		38.4			56.3			38.3			58.8	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	58.9	6.5	27.6	26.9	69.0	9.0	25.1
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	33.0	38.0	6.0	37.0	6.0	65.0	6.0	37.0
Max Q Clear Time (g_c+I1), s	35.0	36.9	3.9	6.1	2.3	42.0	5.8	19.2
Green Ext Time (p_c), s	0.0	0.7	0.0	0.7	0.0	9.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	48.5
HCM 6th LOS	D

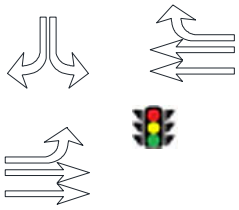
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

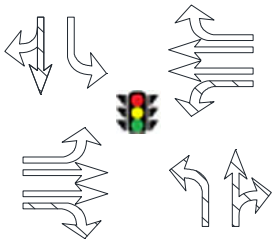
E/W STREET : AIR EXPRESSWAY
N/S STREET : GATEWAY DRIVE
CONDITION : AM PEAK HOUR

INTERSECTION : 2
PROJECTED GROWTH PER YEAR : 3.5%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
AIR EXPRESSWAY							
EB LEFT	69	14	83	0	83	102	102
EB THRU	696	146	842	419	1261	1244	1663
EB RIGHT	0	0	0	84	84	0	84
WB LEFT	0	0	0	0	0	0	0
WB THRU	595	125	720	132	852	953	1085
WB RIGHT	101	21	122	0	122	83	83
GATEWAY DRIVE							
NB LEFT	0	0	0	26	26	0	26
NB THRU	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0
SB LEFT	39	8	47	0	47	34	34
SB THRU	0	0	0	0	0	0	0
SB RIGHT	7	1	8	0	8	10	10
TOTALS	**1507**	**315**	**1822**	**661**	**2483**	**2426**	**3087**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2	OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : GATEWAY DRIVE
CONDITION : AM PEAK HOUR
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
1	0	0	0	0	0	0	0	1	0	0	3
2	0	3	0	0	1	1	0	0	0	0	1
0	0	4	0	0	1	0	0	1	0	0	0
2	0	8	0	0	0	0	0	1	0	0	1

SOUTH 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

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
15	139	0	0	2	0	0	1	0	1	3	0
16	123	0	2	1	0	0	0	0	3	4	0
17	132	0	0	4	0	0	0	0	5	5	0
11	136	0	1	0	0	2	0	0	2	3	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
0	132	6	0	1	0	0	1	0	0	5	0
0	117	7	0	0	1	0	1	0	0	6	2
0	99	8	0	3	1	0	0	2	0	4	0
0	106	13	0	2	0	0	1	0	0	7	2

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

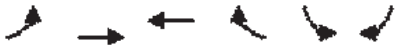
	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	8	34	**42**	**53**	**69**
EB THRU	31	454	**485**	**535**	**696**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	23	530	**553**	**588**	**595**
WB RIGHT	16	59	**75**	**101**	**101**
GATEWAY DRIVE					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	10	15	**25**	**39**	**39**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	1	5	**6**	**7**	**7**



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	696	595	101	39	7
Future Volume (veh/h)	69	696	595	101	39	7
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	73	733	626	106	41	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	604	3205	1888	842	92	82
Arrive On Green	0.67	1.00	0.52	0.52	0.05	0.05
Sat Flow, veh/h	1810	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	73	733	626	106	41	7
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1810	1610
Q Serve(g_s), s	1.9	0.0	13.0	4.4	2.9	0.5
Cycle Q Clear(g_c), s	1.9	0.0	13.0	4.4	2.9	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	604	3205	1888	842	92	82
V/C Ratio(X)	0.12	0.23	0.33	0.13	0.45	0.09
Avail Cap(c_a), veh/h	604	3205	1888	842	334	297
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	17.9	15.8	59.9	58.8
Incr Delay (d2), s/veh	0.1	0.2	0.5	0.3	3.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	5.1	1.6	1.4	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.8	0.2	18.4	16.1	63.3	59.3
LnGrp LOS	B	A	B	B	E	E
Approach Vol, veh/h		806	732		48	
Approach Delay, s/veh		1.5	18.0		62.7	
Approach LOS		A	B		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		119.4		10.6	47.4	72.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		98.0		24.0	26.0	68.0
Max Q Clear Time (g_c+I1), s		2.0		4.9	3.9	15.0
Green Ext Time (p_c), s		4.9		0.1	0.1	4.4

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		11.0
HCM 6th LOS		B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	83	842	720	122	47	8
Future Volume (veh/h)	83	842	720	122	47	8
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	886	758	128	49	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	599	3194	1888	842	97	86
Arrive On Green	0.66	1.00	0.52	0.52	0.05	0.05
Sat Flow, veh/h	1810	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	87	886	758	128	49	8
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1810	1610
Q Serve(g_s), s	2.3	0.0	16.5	5.4	3.4	0.6
Cycle Q Clear(g_c), s	2.3	0.0	16.5	5.4	3.4	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	599	3194	1888	842	97	86
V/C Ratio(X)	0.15	0.28	0.40	0.15	0.50	0.09
Avail Cap(c_a), veh/h	599	3194	1888	842	334	297
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	18.7	16.1	59.8	58.5
Incr Delay (d2), s/veh	0.1	0.2	0.6	0.4	4.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.1	6.5	1.9	1.7	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.2	0.2	19.4	16.4	63.8	59.0
LnGrp LOS	B	A	B	B	E	E
Approach Vol, veh/h		973	886		57	
Approach Delay, s/veh		1.5	18.9		63.1	
Approach LOS		A	B		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	119.0		11.0	47.0	72.0
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	98.0		24.0	26.0	68.0
Max Q Clear Time (g_c+I1), s	2.0		5.4	4.3	18.5
Green Ext Time (p_c), s	6.3		0.1	0.2	5.5

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	11.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1261	84	0	852	122	26	0	0	47	0	8
Future Volume (veh/h)	83	1261	84	0	852	122	26	0	0	47	0	8
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	87	1327	88	0	897	128	27	0	0	49	0	8
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	602	2806	1252	2	1444	644	39	88	0	78	0	109
Arrive On Green	0.33	0.78	0.78	0.00	0.27	0.27	0.02	0.00	0.00	0.04	0.00	0.07
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	87	1327	88	0	897	128	27	0	0	49	0	8
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1900	0	1810	0	1610
Q Serve(g_s), s	3.0	11.6	1.2	0.0	19.6	4.3	1.3	0.0	0.0	2.4	0.0	0.4
Cycle Q Clear(g_c), s	3.0	11.6	1.2	0.0	19.6	4.3	1.3	0.0	0.0	2.4	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	602	2806	1252	2	1444	644	39	88	0	78	0	109
V/C Ratio(X)	0.14	0.47	0.07	0.00	0.62	0.20	0.68	0.00	0.00	0.63	0.00	0.07
Avail Cap(c_a), veh/h	602	2806	1252	121	1444	644	121	338	0	181	0	340
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.00	0.91	0.91	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	3.5	2.4	0.0	27.0	13.3	43.7	0.0	0.0	42.4	0.0	39.3
Incr Delay (d2), s/veh	0.1	0.4	0.1	0.0	1.8	0.6	18.8	0.0	0.0	8.0	0.0	0.3
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	1.2	1.8	0.3	0.0	8.8	2.2	0.8	0.0	0.0	1.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.1	3.9	2.4	0.0	28.8	13.9	62.5	0.0	0.0	50.4	0.0	39.6
LnGrp LOS	C	A	A		C	B	E			D		D
Approach Vol, veh/h		1502			1025			27			57	
Approach Delay, s/veh		4.8			26.9			62.5			48.9	
Approach LOS		A			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	74.0	6.0	10.1	34.0	40.0	7.9	8.2
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	6.0	43.0	6.0	19.0	13.0	36.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	10.0	13.6	3.3	2.4	5.0	21.6	4.4	0.0
Green Ext Time (p_c), s	0.0	10.5	0.0	0.0	0.1	5.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	15.0
HCM 6th LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	102	1244	953	83	34	10
Future Volume (veh/h)	102	1244	953	83	34	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	1309	1003	87	36	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	647	3206	1805	805	91	81
Arrive On Green	0.71	1.00	0.50	0.50	0.05	0.05
Sat Flow, veh/h	1810	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	107	1309	1003	87	36	11
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1810	1610
Q Serve(g_s), s	2.5	0.0	25.0	3.7	2.5	0.8
Cycle Q Clear(g_c), s	2.5	0.0	25.0	3.7	2.5	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	647	3206	1805	805	91	81
V/C Ratio(X)	0.17	0.41	0.56	0.11	0.40	0.14
Avail Cap(c_a), veh/h	647	3206	1805	805	445	396
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	22.5	17.2	59.8	59.0
Incr Delay (d2), s/veh	0.1	0.3	1.2	0.3	2.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	10.0	1.3	1.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	12.4	0.3	23.7	17.4	62.6	59.8
LnGrp LOS	B	A	C	B	E	E
Approach Vol, veh/h		1416	1090		47	
Approach Delay, s/veh		1.2	23.2		61.9	
Approach LOS		A	C		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	119.5		10.5	50.5	69.0
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	90.0		32.0	21.0	65.0
Max Q Clear Time (g_c+I1), s	2.0		4.5	4.5	27.0
Green Ext Time (p_c), s	11.6		0.1	0.2	7.6

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	11.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1663	84	0	1085	83	26	0	0	34	0	10
Future Volume (veh/h)	102	1663	84	0	1085	83	26	0	0	34	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	1751	88	0	1142	87	27	0	0	36	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	613	2828	1261	2	1444	644	39	87	0	68	0	99
Arrive On Green	0.34	0.78	0.78	0.00	0.13	0.13	0.02	0.00	0.00	0.04	0.00	0.06
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	107	1751	88	0	1142	87	27	0	0	36	0	11
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1900	0	1810	0	1610
Q Serve(g_s), s	3.7	18.4	1.1	0.0	27.6	3.4	1.3	0.0	0.0	1.8	0.0	0.6
Cycle Q Clear(g_c), s	3.7	18.4	1.1	0.0	27.6	3.4	1.3	0.0	0.0	1.8	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	613	2828	1261	2	1444	644	39	87	0	68	0	99
V/C Ratio(X)	0.17	0.62	0.07	0.00	0.79	0.14	0.68	0.00	0.00	0.53	0.00	0.11
Avail Cap(c_a), veh/h	613	2828	1261	121	1444	644	121	338	0	181	0	340
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	0.14	0.00	0.85	0.85	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	4.1	2.2	0.0	35.4	15.8	43.7	0.0	0.0	42.5	0.0	39.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	3.8	0.4	18.8	0.0	0.0	6.3	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.4	0.2	0.0	13.7	1.7	0.8	0.0	0.0	0.9	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.9	4.2	2.2	0.0	39.3	16.1	62.5	0.0	0.0	48.8	0.0	40.4
LnGrp LOS	C	A	A		D	B	E			D		D
Approach Vol, veh/h		1946			1229			27			47	
Approach Delay, s/veh		5.1			37.6			62.5			46.9	
Approach LOS		A			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	74.5	6.0	9.5	34.5	40.0	7.4	8.1
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	6.0	43.0	6.0	19.0	13.0	36.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	10.0	20.4	3.3	2.6	5.7	29.6	3.8	0.0
Green Ext Time (p_c), s	0.0	13.4	0.0	0.0	0.1	3.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	18.5
HCM 6th LOS	B

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : GATEWAY DRIVE
CONDITION : PM PEAK HOUR

INTERSECTION : 2
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
AIR EXPRESSWAY							
EB LEFT	19	4	23	0	23	31	31
EB THRU	767	161	928	189	1117	1,154	1343
EB RIGHT	0	0	0	38	38	0	38
WB LEFT	0	0	0	0	0	0	0
WB THRU	729	153	882	474	1356	1,205	1679
WB RIGHT	61	13	74	0	74	50	50
GATEWAY DRIVE							
NB LEFT	0	0	0	94	94	0	94
NB THRU	0	0	0	0	0	0	0
NB RIGHT	0	0	0	0	0	0	0
SB LEFT	58	12	70	0	70	51	51
SB THRU	0	0	0	0	0	0	0
SB RIGHT	25	5	30	0	30	49	49
TOTALS	**1659**	**348**	**2007**	**795**	**2802**	**2540**	**3335**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2	OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : GATEWAY DRIVE
CONDITION : PM PEAK HOUR
PHF : 0.97

NORTH LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
1	0	13	0	0	0	0	0	1	1	0	0
1	0	8	0	0	0	0	0	0	1	0	0
4	0	6	0	0	1	0	0	3	1	0	2
4	0	9	0	0	0	0	0	0	1	0	2

SOUTH 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

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
13	143	0	0	0	0	0	2	0	0	8	0
14	129	0	0	1	0	0	2	0	1	9	0
8	127	0	0	2	0	1	0	0	3	6	0
9	141	0	0	1	0	0	0	0	1	5	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
0	154	2	0	5	0	0	0	0	0	8	1
0	153	3	0	2	0	0	0	0	0	11	1
0	161	1	0	1	0	0	0	0	0	9	2
0	163	1	0	2	0	0	1	0	0	6	0

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

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	4	7	**11**	**19**	**19**
EB THRU	45	631	**676**	**750**	**767**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	36	540	**576**	**638**	**729**
WB RIGHT	6	44	**50**	**61**	**61**
GATEWAY DRIVE					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	9	36	**45**	**58**	**58**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	4	10	**14**	**22**	**25**



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	19	767	729	61	58	25
Future Volume (veh/h)	19	767	729	61	58	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	791	752	63	60	26
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	311	3176	2444	1090	106	95
Arrive On Green	0.34	1.00	0.68	0.68	0.06	0.06
Sat Flow, veh/h	1810	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	20	791	752	63	60	26
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1810	1610
Q Serve(g_s), s	1.0	0.0	11.1	1.7	4.2	2.0
Cycle Q Clear(g_c), s	1.0	0.0	11.1	1.7	4.2	2.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	311	3176	2444	1090	106	95
V/C Ratio(X)	0.06	0.25	0.31	0.06	0.56	0.27
Avail Cap(c_a), veh/h	311	3176	2444	1090	278	248
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	8.6	7.1	59.6	58.5
Incr Delay (d2), s/veh	0.1	0.2	0.3	0.1	4.6	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	3.7	0.5	2.0	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	35.7	0.2	8.9	7.2	64.2	60.1
LnGrp LOS	D	A	A	A	E	E
Approach Vol, veh/h		811	815		86	
Approach Delay, s/veh		1.0	8.8		62.9	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		118.4		11.6	26.4	92.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		102.0		20.0	10.0	88.0
Max Q Clear Time (g_c+I1), s		2.0		6.2	3.0	13.1
Green Ext Time (p_c), s		5.4		0.1	0.0	5.3

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		7.8
HCM 6th LOS		A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	23	928	882	74	70	30
Future Volume (veh/h)	23	928	882	74	70	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	957	909	76	72	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	309	3171	2444	1090	109	97
Arrive On Green	0.34	1.00	0.68	0.68	0.06	0.06
Sat Flow, veh/h	1810	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	24	957	909	76	72	31
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1810	1610
Q Serve(g_s), s	1.2	0.0	14.1	2.1	5.1	2.4
Cycle Q Clear(g_c), s	1.2	0.0	14.1	2.1	5.1	2.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	309	3171	2444	1090	109	97
V/C Ratio(X)	0.08	0.30	0.37	0.07	0.66	0.32
Avail Cap(c_a), veh/h	309	3171	2444	1090	278	248
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	9.1	7.1	59.8	58.6
Incr Delay (d2), s/veh	0.1	0.2	0.4	0.1	6.7	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	4.8	0.6	2.5	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.0	0.2	9.5	7.2	66.5	60.4
LnGrp LOS	D	A	A	A	E	E
Approach Vol, veh/h		981	985		103	
Approach Delay, s/veh		1.0	9.3		64.7	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		118.2		11.8	26.2	92.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		102.0		20.0	10.0	88.0
Max Q Clear Time (g_c+I1), s		2.0		7.1	3.2	16.1
Green Ext Time (p_c), s		7.0		0.2	0.0	6.8

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		8.2
HCM 6th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1117	38	0	1356	74	94	0	0	70	0	30
Future Volume (veh/h)	23	1117	38	0	1356	74	94	0	0	70	0	30
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	1152	39	0	1398	76	97	0	0	72	0	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	1845	823	294	2359	1052	121	167	0	110	0	132
Arrive On Green	0.02	0.51	0.51	0.00	1.00	1.00	0.07	0.00	0.00	0.06	0.00	0.08
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	24	1152	39	0	1398	76	97	0	0	72	0	31
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1900	0	1810	0	1610
Q Serve(g_s), s	1.2	20.6	0.7	0.0	0.0	0.0	4.8	0.0	0.0	3.5	0.0	1.6
Cycle Q Clear(g_c), s	1.2	20.6	0.7	0.0	0.0	0.0	4.8	0.0	0.0	3.5	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	1845	823	294	2359	1052	121	167	0	110	0	132
V/C Ratio(X)	0.66	0.62	0.05	0.00	0.59	0.07	0.80	0.00	0.00	0.65	0.00	0.23
Avail Cap(c_a), veh/h	121	1845	823	294	2359	1052	121	338	0	121	0	286
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.40	0.00	0.78	0.78	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	15.8	5.1	0.0	0.0	0.0	41.4	0.0	0.0	41.3	0.0	38.7
Incr Delay (d2), s/veh	8.0	0.6	0.0	0.0	0.9	0.1	31.3	0.0	0.0	10.7	0.0	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	0.6	7.1	0.4	0.0	0.3	0.0	3.1	0.0	0.0	1.8	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.8	16.4	5.2	0.0	0.9	0.1	72.7	0.0	0.0	52.0	0.0	39.6
LnGrp LOS	D	B	A		A	A	E			D		D
Approach Vol, veh/h		1215			1474			97			103	
Approach Delay, s/veh		16.8			0.8			72.7			48.3	
Approach LOS		B			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	50.0	10.0	11.4	5.8	62.8	9.5	11.9
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	6.0	46.0	6.0	16.0	6.0	46.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	3.0	22.6	6.8	3.6	3.2	2.0	5.5	0.0
Green Ext Time (p_c), s	0.0	7.9	0.0	0.1	0.0	12.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	11.6
HCM 6th LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	1154	1205	50	51	49
Future Volume (veh/h)	31	1154	1205	50	51	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	32	1190	1242	52	53	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	434	3171	2194	978	109	97
Arrive On Green	0.48	1.00	0.61	0.61	0.06	0.06
Sat Flow, veh/h	1810	3705	3705	1610	1810	1610
Grp Volume(v), veh/h	32	1190	1242	52	53	51
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1810	1610
Q Serve(g_s), s	1.2	0.0	26.7	1.7	3.7	4.0
Cycle Q Clear(g_c), s	1.2	0.0	26.7	1.7	3.7	4.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	434	3171	2194	978	109	97
V/C Ratio(X)	0.07	0.38	0.57	0.05	0.49	0.53
Avail Cap(c_a), veh/h	434	3171	2194	978	390	347
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	15.3	10.3	59.2	59.3
Incr Delay (d2), s/veh	0.0	0.1	1.1	0.1	3.4	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	9.9	0.6	1.8	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.0	0.1	16.3	10.4	62.5	63.7
LnGrp LOS	C	A	B	B	E	E
Approach Vol, veh/h		1222	1294		104	
Approach Delay, s/veh		0.7	16.1		63.1	
Approach LOS		A	B		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		118.2		11.8	35.2	83.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		94.0		28.0	11.0	79.0
Max Q Clear Time (g_c+I1), s		2.0		6.0	3.2	28.7
Green Ext Time (p_c), s		9.9		0.2	0.0	10.6

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		10.8
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1343	38	0	1679	50	94	0	0	51	0	49
Future Volume (veh/h)	31	1343	38	0	1679	50	94	0	0	51	0	49
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	32	1385	39	0	1731	52	97	0	0	53	0	51
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	44	1845	823	293	2342	1045	121	187	0	92	0	132
Arrive On Green	0.02	0.51	0.51	0.00	1.00	1.00	0.07	0.00	0.00	0.05	0.00	0.08
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	1900	0	1810	0	1610
Grp Volume(v), veh/h	32	1385	39	0	1731	52	97	0	0	53	0	51
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	1900	0	1810	0	1610
Q Serve(g_s), s	1.6	27.4	0.7	0.0	0.0	0.0	4.8	0.0	0.0	2.6	0.0	2.7
Cycle Q Clear(g_c), s	1.6	27.4	0.7	0.0	0.0	0.0	4.8	0.0	0.0	2.6	0.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	1845	823	293	2342	1045	121	187	0	92	0	132
V/C Ratio(X)	0.72	0.75	0.05	0.00	0.74	0.05	0.80	0.00	0.00	0.58	0.00	0.38
Avail Cap(c_a), veh/h	121	1845	823	293	2342	1045	121	338	0	121	0	286
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.00	0.62	0.62	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.6	17.5	5.1	0.0	0.0	0.0	41.4	0.0	0.0	41.8	0.0	39.1
Incr Delay (d2), s/veh	2.0	0.3	0.0	0.0	1.3	0.1	31.3	0.0	0.0	5.7	0.0	1.8
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	0.7	9.3	0.4	0.0	0.4	0.0	3.1	0.0	0.0	1.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.6	17.7	5.1	0.0	1.3	0.1	72.7	0.0	0.0	47.4	0.0	41.0
LnGrp LOS	D	B	A		A	A	E			D		D
Approach Vol, veh/h		1456			1783			97			104	
Approach Delay, s/veh		18.0			1.3			72.7			44.3	
Approach LOS		B			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	50.0	10.0	11.4	6.2	62.4	8.6	12.8
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	6.6	46.0	6.0	16.0	6.0	46.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	10.0	29.4	6.8	4.7	3.6	2.0	4.6	0.0
Green Ext Time (p_c), s	0.0	8.4	0.0	0.1	0.0	18.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	11.7
HCM 6th LOS	B

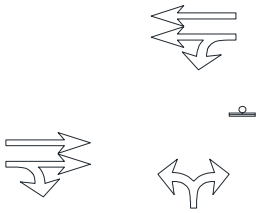
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

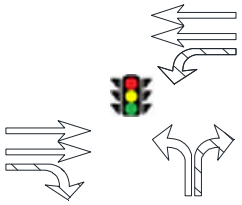
E/W STREET : AIR EXPRESSWAY
N/S STREET : EMERALD RD (NORTH)
CONDITION : AM PEAK HOUR

INTERSECTION : 3
PROJECTED GROWTH PER YEAR : 3.5%

CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
AIR EXPRESSWAY							
EB LEFT	0	0	0	0	0	0	0
EB THRU	689	145	834	136	970	1226	1362
EB RIGHT	46	10	56	154	210	51	205
WB LEFT	26	5	31	134	165	26	160
WB THRU	681	143	824	95	919	1021	1116
WB RIGHT	0	0	0	0	0	0	0
EMERALD RD (NORTH)							
NB LEFT	15	3	18	48	66	15	63
NB THRU	0	0	0	0	0	0	0
NB RIGHT	17	4	21	29	50	18	47
SB LEFT	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**1474**	**310**	**1784**	**596**	**2380**	**2357**	**2953**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : EMERALD RD (NORTH)
CONDITION : AM PEAK HOUR
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

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	0	0	0	0	0	0	0	0	0	1
6	0	4	0	0	0	0	0	0	0	0	0
1	0	3	0	0	0	0	0	0	0	0	0
4	0	2	0	0	0	0	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	121	1	0	3	0	0	0	0	0	5	2
0	117	2	0	1	0	0	0	0	0	2	1
0	122	1	0	1	0	0	3	0	0	3	2
0	135	1	0	0	0	0	0	0	0	1	2

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	132	0	0	0	0	0	0	0	1	1	0
5	114	0	0	2	0	0	2	0	1	1	0
3	77	0	0	1	0	0	0	0	1	5	0
4	111	0	0	0	0	0	1	0	2	4	0

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

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	17	434	**451**	**478**	**689**
EB RIGHT	5	17	**22**	**32**	**46**
WB LEFT	7	5	**12**	**26**	**26**
WB THRU	19	495	**514**	**542**	**681**
WB RIGHT	0	0	**0**	**0**	**0**
EMERALD RD (NORTH)					
NB LEFT	1	9	**10**	**12**	**15**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	16	**16**	**16**	**17**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	689	46	26	681	15	17
Future Vol, veh/h	689	46	26	681	15	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	741	49	28	732	16	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	790	0	1188	395
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	422	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	839	-	184	610
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	839	-	174	610
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	599	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.5	19.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	281	-	-	839	-
HCM Lane V/C Ratio	0.122	-	-	0.033	-
HCM Ctrl Dly (s/v)	19.6	-	-	9.4	0.2
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q (veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	834	56	31	824	18	21
Future Vol, veh/h	834	56	31	824	18	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	897	60	33	886	19	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	957	0	1436	479
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	509	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	727	-	127	538
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	727	-	116	538
Mov Cap-2 Maneuver	-	-	-	-	116	-
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	523	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.8	27.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	201	-	-	727	-
HCM Lane V/C Ratio	0.209	-	-	0.046	-
HCM Ctrl Dly (s/v)	27.6	-	-	10.2	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q (veh)	0.8	-	-	0.1	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	970	210	165	919	66	50
Future Volume (veh/h)	970	210	165	919	66	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1976	1900	1900	1976	1976
Adj Flow Rate, veh/h	1021	221	174	967	69	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1524	707	161	2006	669	595
Arrive On Green	0.14	0.14	0.09	0.56	0.36	0.36
Sat Flow, veh/h	3705	1675	1810	3705	1882	1675
Grp Volume(v), veh/h	1021	221	174	967	69	53
Grp Sat Flow(s),veh/h/ln	1805	1675	1810	1805	1882	1675
Q Serve(g_s), s	24.2	10.7	8.0	14.6	2.2	1.9
Cycle Q Clear(g_c), s	24.2	10.7	8.0	14.6	2.2	1.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1524	707	161	2006	669	595
V/C Ratio(X)	0.67	0.31	1.08	0.48	0.10	0.09
Avail Cap(c_a), veh/h	1524	707	161	2006	669	595
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.87	0.87	1.00	1.00
Uniform Delay (d), s/veh	32.8	27.0	41.0	12.1	19.4	19.3
Incr Delay (d2), s/veh	1.7	0.8	89.7	0.7	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	4.4	7.3	4.9	1.0	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	34.4	27.8	130.7	12.9	19.7	19.6
LnGrp LOS	C	C	F	B	B	B
Approach Vol, veh/h	1242			1141	122	
Approach Delay, s/veh	33.3			30.8	19.7	
Approach LOS	C			C	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.0	42.0				54.0	36.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	38.0				50.0	32.0
Max Q Clear Time (g_c+I1), s	10.0	26.2				16.6	4.2
Green Ext Time (p_c), s	0.0	5.4				6.7	0.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	31.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1226	51	26	1021	15	18
Future Vol, veh/h	1226	51	26	1021	15	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1291	54	27	1075	16	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1345	0	1910	673
Stage 1	-	-	-	-	1318	-
Stage 2	-	-	-	-	592	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	519	-	61	402
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	519	-	53	402
Mov Cap-2 Maneuver	-	-	-	-	53	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.1	58.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	101	-	-	519	-
HCM Lane V/C Ratio	0.344	-	-	0.053	-
HCM Ctrl Dly (s/v)	58.3	-	-	12.3	0.8
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q (veh)	1.4	-	-	0.2	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1362	205	160	1116	63	47
Future Volume (veh/h)	1362	205	160	1116	63	47
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1976	1900	1900	1976	1976
Adj Flow Rate, veh/h	1434	216	168	1175	66	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1604	744	121	2006	669	595
Arrive On Green	0.15	0.15	0.07	0.56	0.36	0.36
Sat Flow, veh/h	3705	1675	1810	3705	1882	1675
Grp Volume(v), veh/h	1434	216	168	1175	66	49
Grp Sat Flow(s),veh/h/ln	1805	1675	1810	1805	1882	1675
Q Serve(g_s), s	35.1	10.3	6.0	19.3	2.1	1.7
Cycle Q Clear(g_c), s	35.1	10.3	6.0	19.3	2.1	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1604	744	121	2006	669	595
V/C Ratio(X)	0.89	0.29	1.39	0.59	0.10	0.08
Avail Cap(c_a), veh/h	1604	744	121	2006	669	595
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.82	0.82	1.00	1.00
Uniform Delay (d), s/veh	36.3	25.7	42.0	13.2	19.4	19.3
Incr Delay (d2), s/veh	3.0	0.3	212.7	1.0	0.3	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	4.1	9.6	6.5	1.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	39.3	26.1	254.7	14.2	19.7	19.5
LnGrp LOS	D	C	F	B	B	B
Approach Vol, veh/h	1650			1343	115	
Approach Delay, s/veh	37.6			44.3	19.6	
Approach LOS	D			D	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.0	44.0				54.0	36.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	6.0	40.0				50.0	32.0
Max Q Clear Time (g_c+I1), s	8.0	37.1				21.3	4.1
Green Ext Time (p_c), s	0.0	2.2				8.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	39.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : EMERALD RD (NORTH)
CONDITION : PM PEAK HOUR

INTERSECTION : 3
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
AIR EXPRESSWAY							
EB LEFT	0	0	0	0	0	0	0
EB THRU	803	169	972	119	1091	1,182	1301
EB RIGHT	22	5	27	68	95	23	91
WB LEFT	11	2	13	59	72	11	70
WB THRU	761	160	921	158	1079	1,223	1381
WB RIGHT	0	0	0	0	0	0	0
EMERALD RD (NORTH)							
NB LEFT	29	6	35	174	209	32	206
NB THRU	0	0	0	0	0	0	0
NB RIGHT	20	4	24	107	131	21	128
SB LEFT	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**1646**	**346**	**1992**	**685**	**2677**	**2492**	**3177**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : EMERALD RD (NORTH)
CONDITION : PM PEAK HOUR
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
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
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											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
0	0	5	0	0	0	0	0	0	3	0	1
1	0	4	0	0	0	0	0	0	2	0	1
1	0	3	0	0	0	0	0	0	1	0	1
0	0	0	0	0	0	0	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	131	0	0	0	0	0	2	0	0	1	2
0	105	2	0	2	0	0	0	0	0	3	0
0	152	0	0	0	0	0	0	0	0	1	0
0	136	3	0	1	0	0	1	0	0	2	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
3	145	0	0	0	0	0	2	0	1	2	0
0	146	0	0	1	0	0	2	0	1	1	0
1	159	0	0	1	0	0	0	0	0	1	0
1	145	0	0	0	0	0	0	0	2	3	0

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

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	0	0	**0**	**0**	**0**
EB THRU	13	595	**608**	**627**	**803**
EB RIGHT	4	5	**9**	**17**	**22**
WB LEFT	2	5	**7**	**11**	**11**
WB THRU	13	524	**537**	**556**	**761**
WB RIGHT	0	0	**0**	**0**	**0**
EMERALD RD (NORTH)					
NB LEFT	3	12	**15**	**21**	**29**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	6	2	**8**	**20**	**20**
SB LEFT	0	0	**0**	**0**	**0**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	0	0	**0**	**0**	**0**

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	803	22	11	761	29	20
Future Vol, veh/h	803	22	11	761	29	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	873	24	12	827	32	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	897	0	1323	449
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	765	-	150	563
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	624	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	765	-	146	563
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.2	28
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	209	-	-	765	-
HCM Lane V/C Ratio	0.255	-	-	0.016	-
HCM Ctrl Dly (s/v)	28	-	-	9.8	0.1
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q (veh)	1	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	972	27	13	921	35	24
Future Vol, veh/h	972	27	13	921	35	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1057	29	14	1001	38	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1086	0	1601	543
Stage 1	-	-	-	-	1072	-
Stage 2	-	-	-	-	529	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	650	-	99	489
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	561	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	650	-	94	489
Mov Cap-2 Maneuver	-	-	-	-	94	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	534	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.4	50.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	140	-	-	650	-
HCM Lane V/C Ratio	0.458	-	-	0.022	-
HCM Ctrl Dly (s/v)	50.8	-	-	10.7	0.3
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q (veh)	2.1	-	-	0.1	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1091	95	72	1079	209	131
Future Volume (veh/h)	1091	95	72	1079	209	131
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1148	100	76	1136	220	138
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1649	736	98	2006	643	573
Arrive On Green	0.15	0.15	0.05	0.56	0.36	0.36
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	1148	100	76	1136	220	138
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	27.2	4.8	3.7	18.4	8.0	5.4
Cycle Q Clear(g_c), s	27.2	4.8	3.7	18.4	8.0	5.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1649	736	98	2006	643	573
V/C Ratio(X)	0.70	0.14	0.78	0.57	0.34	0.24
Avail Cap(c_a), veh/h	1649	736	121	2006	643	573
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.87	0.87	1.00	1.00
Uniform Delay (d), s/veh	32.3	22.8	42.0	13.0	21.3	20.4
Incr Delay (d2), s/veh	1.9	0.3	19.4	1.0	1.4	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	1.7	2.1	6.2	3.6	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	34.2	23.1	61.4	14.0	22.7	21.4
LnGrp LOS	C	C	E	B	C	C
Approach Vol, veh/h	1248			1212	358	
Approach Delay, s/veh	33.3			17.0	22.2	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.9	45.1				54.0	36.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	6.9	40.0				50.0	32.0
Max Q Clear Time (g_c+I1), s	5.7	29.2				20.4	10.0
Green Ext Time (p_c), s	0.0	5.4				8.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	24.9
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1182	23	11	1223	32	21
Future Vol, veh/h	1182	23	11	1223	32	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1244	24	12	1287	34	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1268	0	1924	634
Stage 1	-	-	-	-	1256	-
Stage 2	-	-	-	-	668	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	555	-	60	427
Stage 1	-	-	-	-	235	-
Stage 2	-	-	-	-	477	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	555	-	55	427
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	235	-
Stage 2	-	-	-	-	441	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.5	108.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	84	-	-	555	-
HCM Lane V/C Ratio	0.664	-	-	0.021	-
HCM Ctrl Dly (s/v)	108.4	-	-	11.6	0.4
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q (veh)	3.1	-	-	0.1	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1301	91	70	1381	206	128
Future Volume (veh/h)	1301	91	70	1381	206	128
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1369	96	74	1454	217	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1654	738	96	2006	643	573
Arrive On Green	0.15	0.15	0.05	0.56	0.36	0.36
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	1369	96	74	1454	217	135
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	33.1	4.6	3.6	27.0	7.9	5.3
Cycle Q Clear(g_c), s	33.1	4.6	3.6	27.0	7.9	5.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1654	738	96	2006	643	573
V/C Ratio(X)	0.83	0.13	0.77	0.72	0.34	0.24
Avail Cap(c_a), veh/h	1654	738	121	2006	643	573
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.72	0.72	1.00	1.00
Uniform Delay (d), s/veh	34.7	22.7	42.1	14.9	21.2	20.4
Incr Delay (d2), s/veh	3.3	0.2	15.9	1.7	1.4	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	1.6	1.9	9.1	3.5	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	38.0	22.9	58.0	16.6	22.7	21.4
LnGrp LOS	D	C	E	B	C	C
Approach Vol, veh/h	1465			1528	352	
Approach Delay, s/veh	37.0			18.6	22.2	
Approach LOS	D			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.8	45.2				54.0	36.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	6.8	40.0				50.0	32.0
Max Q Clear Time (g_c+I1), s	5.6	35.1				29.0	9.9
Green Ext Time (p_c), s	0.0	3.4				9.9	1.1

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	27.0
HCM 6th LOS	C

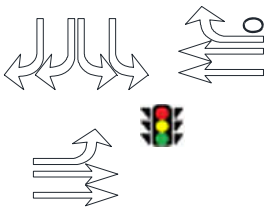
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

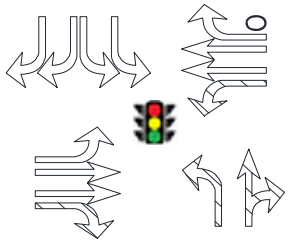
E/W STREET : AIR EXPRESSWAY
N/S STREET : PHANTOM WEST
CONDITION : AM PEAK HOUR

INTERSECTION : 4
PROJECTED GROWTH PER YEAR : 3.5%

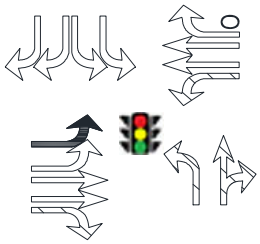
CONDITION DIAGRAMS



EXISTING GEOMETRICS



PROJECT GEOMETRICS



FUTURE YEAR 2046 GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
AIR EXPRESSWAY							
EB LEFT	556	117	673	0	673	929	929
EB THRU	150	32	182	124	306	316	440
EB RIGHT	0	0	0	41	41	0	41
WB LEFT	0	0	0	38	38	0	38
WB THRU	531	112	643	195	838	752	947
WB RIGHT	154	32	186	0	186	201	201
PHANTOM WEST							
NB LEFT	0	0	0	34	34	0	34
NB THRU	0	0	0	0	0	0	0
NB RIGHT	0	0	0	11	11	0	11
SB LEFT	55	12	67	0	67	107	107
SB THRU	0	0	0	0	0	0	0
SB RIGHT	176	37	213	0	213	295	295
TOTALS	**1622**	**342**	**1964**	**443**	**2407**	**2600**	**3043**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2	OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : PHANTOM WEST
CONDITION : AM PEAK HOUR
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
12	0	7	0	0	0	0	0	0	3	0	0
27	0	14	1	0	0	0	0	0	1	0	0
20	0	8	0	0	1	0	0	0	2	0	1
43	0	21	1	0	0	0	0	0	2	0	0

SOUTH 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

EAST LEG											
AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
29	108	0	0	2	0	0	0	0	1	1	0
42	81	0	0	0	0	0	0	0	1	2	0
31	87	0	0	0	0	0	0	0	2	1	0
37	86	0	0	2	0	0	0	0	1	3	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
0	28	107	0	1	0	0	0	0	0	2	4
0	43	89	0	0	0	0	0	0	0	1	2
0	19	77	0	2	2	0	1	0	0	1	1
0	38	80	0	0	0	0	0	0	0	1	3

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

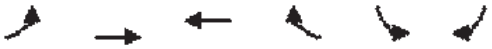
	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	12	353	**365**	**386**	**556**
EB THRU	9	128	**137**	**150**	**150**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	11	362	**373**	**389**	**531**
WB RIGHT	5	139	**144**	**154**	**154**
PHANTOM WEST					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	2	50	**52**	**55**	**55**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	10	102	**112**	**129**	**176**



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	556	150	531	154	55	176
Future Volume (veh/h)	556	150	531	154	55	176
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1976
Adj Flow Rate, veh/h	598	161	571	166	59	189
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	877	3083	1222	681	296	249
Arrive On Green	0.48	0.85	0.34	0.34	0.08	0.08
Sat Flow, veh/h	1810	3705	3705	1610	3510	2947
Grp Volume(v), veh/h	598	161	571	166	59	189
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1755	1474
Q Serve(g_s), s	33.1	0.9	16.2	8.6	2.0	8.2
Cycle Q Clear(g_c), s	33.1	0.9	16.2	8.6	2.0	8.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	877	3083	1222	681	296	249
V/C Ratio(X)	0.68	0.05	0.47	0.24	0.20	0.76
Avail Cap(c_a), veh/h	877	3083	1222	681	837	703
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	25.8	1.4	33.8	24.1	55.4	58.2
Incr Delay (d2), s/veh	2.2	0.0	1.3	0.9	0.3	4.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	0.1	7.0	3.8	0.9	6.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	27.9	1.5	35.1	25.0	55.8	63.0
LnGrp LOS	C	A	D	C	E	E
Approach Vol, veh/h		759	737		248	
Approach Delay, s/veh		22.3	32.8		61.3	
Approach LOS		C	C		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		115.0		15.0	67.0	48.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		91.0		31.0	43.0	44.0
Max Q Clear Time (g_c+I1), s		2.9		10.2	35.1	18.2
Green Ext Time (p_c), s		0.9		0.8	1.3	3.9

Intersection Summary						
HCM 6th Ctrl Delay, s/veh			32.3			
HCM 6th LOS			C			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	673	182	643	186	67	213
Future Volume (veh/h)	673	182	643	186	67	213
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1976
Adj Flow Rate, veh/h	724	196	691	200	72	229
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	851	3031	1222	704	347	292
Arrive On Green	0.47	0.84	0.34	0.34	0.10	0.10
Sat Flow, veh/h	1810	3705	3705	1610	3510	2947
Grp Volume(v), veh/h	724	196	691	200	72	229
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1755	1474
Q Serve(g_s), s	45.9	1.2	20.4	10.4	2.5	9.9
Cycle Q Clear(g_c), s	45.9	1.2	20.4	10.4	2.5	9.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	851	3031	1222	704	347	292
V/C Ratio(X)	0.85	0.06	0.57	0.28	0.21	0.79
Avail Cap(c_a), veh/h	851	3031	1222	704	837	703
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	30.4	1.8	35.2	23.5	53.9	57.2
Incr Delay (d2), s/veh	8.2	0.0	1.9	1.0	0.3	4.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.2	0.2	8.8	4.7	1.1	8.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	38.6	1.8	37.1	24.5	54.2	61.9
LnGrp LOS	D	A	D	C	D	E
Approach Vol, veh/h		920	891		301	
Approach Delay, s/veh		30.8	34.3		60.0	
Approach LOS		C	C		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		113.1		16.9	65.1	48.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		91.0		31.0	43.0	44.0
Max Q Clear Time (g_c+I1), s		3.2		11.9	47.9	22.4
Green Ext Time (p_c), s		1.1		1.0	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	36.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	673	306	41	38	838	186	34	0	11	67	0	213
Future Volume (veh/h)	673	306	41	38	838	186	34	0	11	67	0	213
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1976
Adj Flow Rate, veh/h	708	322	43	40	882	196	36	0	12	71	0	224
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	904	1853	827	543	1131	559	193	0	74	119	0	0
Arrive On Green	0.50	0.51	0.51	0.30	0.31	0.31	0.11	0.00	0.05	0.03	0.00	0.00
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	0	1610	3510	71	
Grp Volume(v), veh/h	708	322	43	40	882	196	36	0	12	71	76.1	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1610	1755	E	
Q Serve(g_s), s	48.2	7.1	2.0	2.4	33.3	8.5	2.7	0.0	1.1	3.0		
Cycle Q Clear(g_c), s	48.2	7.1	2.0	2.4	33.3	8.5	2.7	0.0	1.1	3.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	904	1853	827	543	1131	559	193	0	74	119		
V/C Ratio(X)	0.78	0.17	0.05	0.07	0.78	0.35	0.19	0.00	0.16	0.59		
Avail Cap(c_a), veh/h	904	1853	827	543	1131	559	193	0	193	725		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	30.8	19.5	18.3	37.6	46.8	36.4	61.0	0.0	68.8	71.4		
Incr Delay (d2), s/veh	3.3	0.1	0.1	0.1	5.3	1.7	0.5	0.0	1.0	4.6		
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		
%ile BackOfQ(50%),veh/ln	20.4	2.9	0.8	1.0	15.2	3.4	1.3	0.0	0.5	1.4		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.1	19.6	18.3	37.7	52.1	38.1	61.5	0.0	69.8	76.1		
LnGrp LOS	C	B	B	D	D	D	E		E	E		
Approach Vol, veh/h		1073			1118			48				
Approach Delay, s/veh		29.1			49.2			63.6				
Approach LOS		C			D			E				

Timer - Assigned Phs	1	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	49.0	81.0	20.0		79.0	51.0	9.1	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	77.0	8.0		38.0	47.0	31.0	18.0
Max Q Clear Time (g_c+I1), s	14.4	9.1	4.7		50.2	35.3	5.0	3.1
Green Ext Time (p_c), s	0.0	2.0	0.0		0.0	4.6	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	41.0
HCM 6th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	929	316	752	201	107	295
Future Volume (veh/h)	929	316	752	201	107	295
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1976
Adj Flow Rate, veh/h	978	333	792	212	113	311
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	797	2923	1222	752	452	379
Arrive On Green	0.44	0.81	0.34	0.34	0.13	0.13
Sat Flow, veh/h	1810	3705	3705	1610	3510	2947
Grp Volume(v), veh/h	978	333	792	212	113	311
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1755	1474
Q Serve(g_s), s	57.3	2.5	24.2	10.5	3.8	13.4
Cycle Q Clear(g_c), s	57.3	2.5	24.2	10.5	3.8	13.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	797	2923	1222	752	452	379
V/C Ratio(X)	1.23	0.11	0.65	0.28	0.25	0.82
Avail Cap(c_a), veh/h	797	2923	1222	752	837	703
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	36.4	2.6	36.4	21.3	51.0	55.2
Incr Delay (d2), s/veh	113.1	0.1	2.7	0.9	0.3	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	48.1	0.6	10.5	5.0	1.6	10.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	149.5	2.7	39.1	22.2	51.3	59.6
LnGrp LOS	F	A	D	C	D	E
Approach Vol, veh/h		1311	1004		424	
Approach Delay, s/veh		112.2	35.5		57.4	
Approach LOS		F	D		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		109.3		20.7	61.3	48.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		91.0		31.0	43.0	44.0
Max Q Clear Time (g_c+I1), s		4.5		15.4	59.3	26.2
Green Ext Time (p_c), s		2.0		1.4	0.0	5.1

Intersection Summary						
HCM 6th Ctrl Delay, s/veh			75.6			
HCM 6th LOS			E			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	929	440	41	38	947	201	34	0	11	107	0	295
Future Volume (veh/h)	929	440	41	38	947	201	34	0	11	107	0	295
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1976
Adj Flow Rate, veh/h	978	463	43	40	997	212	36	0	12	113	0	311
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	881	1853	827	519	1131	580	217	0	74	165	0	0
Arrive On Green	0.49	0.51	0.51	0.29	0.31	0.31	0.12	0.00	0.05	0.05	0.00	0.00
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	0	1610	3510	113	
Grp Volume(v), veh/h	978	463	43	40	997	212	36	0	12	113	75.3	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1610	1755	E	
Q Serve(g_s), s	73.0	10.7	2.0	2.4	39.3	7.5	2.7	0.0	1.1	4.8		
Cycle Q Clear(g_c), s	73.0	10.7	2.0	2.4	39.3	7.5	2.7	0.0	1.1	4.8		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	881	1853	827	519	1131	580	217	0	74	165		
V/C Ratio(X)	1.11	0.25	0.05	0.08	0.88	0.37	0.17	0.00	0.16	0.69		
Avail Cap(c_a), veh/h	881	1853	827	519	1131	580	217	0	193	725		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.38	0.38	0.38	1.00	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	38.5	20.4	18.3	39.0	48.9	35.3	59.3	0.0	68.8	70.4		
Incr Delay (d2), s/veh	56.4	0.1	0.0	0.1	10.0	1.8	0.4	0.0	1.0	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		
%ile BackOfQ(50%),veh/ln	48.6	4.4	0.8	1.1	18.5	2.9	1.3	0.0	0.5	2.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.9	20.5	18.3	39.1	58.8	37.1	59.6	0.0	69.8	75.3		
LnGrp LOS	F	C	B	D	E	D	E		E	E		
Approach Vol, veh/h		1484			1249			48				
Approach Delay, s/veh		69.4			54.5			62.2				
Approach LOS		E			D			E				

Timer - Assigned Phs	1	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	47.0	81.0	22.0		77.0	51.0	11.0	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	43.0	77.0	8.0		38.0	47.0	31.0	18.0
Max Q Clear Time (g_c+I1), s	41.4	12.7	4.7		75.0	41.3	6.8	3.1
Green Ext Time (p_c), s	0.0	3.0	0.0		0.0	3.2	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	63.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	929	440	41	38	947	201	34	0	11	107	0	295
Future Volume (veh/h)	929	440	41	38	947	201	34	0	11	107	0	295
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1976
Adj Flow Rate, veh/h	978	463	43	40	997	212	36	0	12	113	0	311
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	1709	1853	827	519	1131	580	217	0	74	165	0	0
Arrive On Green	0.49	0.51	0.51	0.29	0.31	0.31	0.12	0.00	0.05	0.05	0.00	0.00
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	0	1610	3510	113	
Grp Volume(v), veh/h	978	463	43	40	997	212	36	0	12	113	75.3	
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	0	1610	1755	E	
Q Serve(g_s), s	29.7	10.7	2.0	2.4	39.3	7.5	2.7	0.0	1.1	4.8		
Cycle Q Clear(g_c), s	29.7	10.7	2.0	2.4	39.3	7.5	2.7	0.0	1.1	4.8		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	1709	1853	827	519	1131	580	217	0	74	165		
V/C Ratio(X)	0.57	0.25	0.05	0.08	0.88	0.37	0.17	0.00	0.16	0.69		
Avail Cap(c_a), veh/h	1709	1853	827	519	1131	580	639	0	193	725		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.38	0.38	0.38	1.00	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	27.4	20.4	18.3	39.0	48.9	35.3	59.3	0.0	68.8	70.4		
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.1	10.0	1.8	0.4	0.0	1.0	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		
%ile BackOfQ(50%),veh/ln	11.8	4.4	0.8	1.1	18.5	2.9	1.3	0.0	0.5	2.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.5	20.5	18.3	39.1	58.8	37.1	59.6	0.0	69.8	75.3		
LnGrp LOS	C	C	B	D	E	D	E		E	E		
Approach Vol, veh/h		1484			1249			48				
Approach Delay, s/veh		25.1			54.5			62.2				
Approach LOS		C			D			E				

Timer - Assigned Phs	1	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	47.0	81.0	22.0		77.0	51.0	11.0	10.9
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	38.0	77.0	53.0		38.0	47.0	31.0	18.0
Max Q Clear Time (g_c+I1), s	41.4	12.7	4.7		31.7	41.3	6.8	3.1
Green Ext Time (p_c), s	0.0	3.0	0.1		2.1	3.2	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	40.4
HCM 6th LOS	D

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : PHANTOM WEST
CONDITION : PM PEAK HOUR

INTERSECTION : 4
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2027 Ambient Growth	Opening Year 2027 Condition	Phases 1,2,3 Project Trips	Opening Year+Ph1 Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
AIR EXPRESSWAY							
EB LEFT	316	66	382	0	382	479	479
EB THRU	507	106	613	208	821	724	932
EB RIGHT	0	0	0	18	18	0	18
WB LEFT	0	0	0	17	17	0	17
WB THRU	415	87	502	86	588	508	594
WB RIGHT	131	28	159	0	159	135	135
PHANTOM WEST							
NB LEFT	0	0	0	131	131	0	131
NB THRU	0	0	0	0	0	0	0
NB RIGHT	0	0	0	44	44	0	44
SB LEFT	103	22	125	0	125	166	166
SB THRU	0	0	0	0	0	0	0
SB RIGHT	357	75	432	0	432	726	726
TOTALS	**1829**	**384**	**2213**	**504**	**2717**	**2738**	**3242**

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET	OF
TURN VOLUME SUMMARY	TMO	17-Jul-26	MKLT0000-0001	2	OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : PHANTOM WEST
CONDITION : PM PEAK HOUR
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
65	0	22	1	0	0	0	0	0	0	0	0
47	0	18	1	0	1	0	0	0	3	0	1
61	0	30	0	0	0	0	0	0	1	0	1
64	0	25	1	0	0	0	0	0	1	0	0

SOUTH 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

EAST LEG

AUTO			LARGE 2 AXLE			LARGE 3 AXLE			LARGE 4(+) AXLE		
RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT
31	86	0	0	2	0	0	0	0	0	1	0
29	58	0	1	1	0	0	1	0	0	0	0
37	65	0	0	0	0	0	0	0	0	1	0
29	71	0	2	2	0	0	0	0	0	1	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
0	59	40	0	1	0	0	0	0	0	1	2
0	66	39	0	0	0	0	0	0	0	0	0
0	71	43	0	0	1	0	1	0	0	1	0
0	77	48	0	2	0	0	1	0	0	1	1

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

	Truck Volumes	Auto Volumes	Vehicle Totals	PCE Totals	Balanced PCE Totals
AIR EXPRESSWAY					
EB LEFT	4	170	**174**	**181**	**316**
EB THRU	8	273	**281**	**291**	**507**
EB RIGHT	0	0	**0**	**0**	**0**
WB LEFT	0	0	**0**	**0**	**0**
WB THRU	9	280	**289**	**299**	**415**
WB RIGHT	3	126	**129**	**131**	**131**
PHANTOM WEST					
NB LEFT	0	0	**0**	**0**	**0**
NB THRU	0	0	**0**	**0**	**0**
NB RIGHT	0	0	**0**	**0**	**0**
SB LEFT	3	95	**98**	**103**	**103**
SB THRU	0	0	**0**	**0**	**0**
SB RIGHT	8	237	**245**	**257**	**357**



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	316	507	415	131	103	357
Future Volume (veh/h)	316	507	415	131	103	357
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1976
Adj Flow Rate, veh/h	340	545	446	141	111	384
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	652	2828	1416	881	544	457
Arrive On Green	0.36	0.78	0.39	0.39	0.16	0.16
Sat Flow, veh/h	1810	3705	3705	1610	3510	2947
Grp Volume(v), veh/h	340	545	446	141	111	384
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1755	1474
Q Serve(g_s), s	19.2	5.0	11.1	5.6	3.6	16.5
Cycle Q Clear(g_c), s	19.2	5.0	11.1	5.6	3.6	16.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	652	2828	1416	881	544	457
V/C Ratio(X)	0.52	0.19	0.31	0.16	0.20	0.84
Avail Cap(c_a), veh/h	652	2828	1416	881	972	816
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	32.8	3.6	27.4	14.6	47.9	53.4
Incr Delay (d2), s/veh	0.7	0.2	0.6	0.4	0.2	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	1.3	4.7	2.9	1.5	13.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	33.5	3.7	28.0	15.0	48.1	57.6
LnGrp LOS	C	A	C	B	D	E
Approach Vol, veh/h		885	587		495	
Approach Delay, s/veh		15.2	24.9		55.5	
Approach LOS		B	C		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		105.8		24.2	50.8	55.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		86.0		36.0	31.0	51.0
Max Q Clear Time (g_c+I1), s		7.0		18.5	21.2	13.1
Green Ext Time (p_c), s		3.4		1.7	0.7	3.1

Intersection Summary						
HCM 6th Ctrl Delay, s/veh			28.2			
HCM 6th LOS			C			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	382	613	502	159	125	432
Future Volume (veh/h)	382	613	502	159	125	432
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1976
Adj Flow Rate, veh/h	411	659	540	171	134	465
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	600	2725	1416	927	644	541
Arrive On Green	0.33	0.75	0.39	0.39	0.18	0.18
Sat Flow, veh/h	1810	3705	3705	1610	3510	2947
Grp Volume(v), veh/h	411	659	540	171	134	465
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1755	1474
Q Serve(g_s), s	25.5	7.1	13.9	6.6	4.2	19.9
Cycle Q Clear(g_c), s	25.5	7.1	13.9	6.6	4.2	19.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	600	2725	1416	927	644	541
V/C Ratio(X)	0.68	0.24	0.38	0.18	0.21	0.86
Avail Cap(c_a), veh/h	600	2725	1416	927	972	816
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	37.5	4.8	28.2	13.1	45.0	51.4
Incr Delay (d2), s/veh	3.2	0.2	0.8	0.4	0.2	6.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	2.0	5.8	3.5	1.8	15.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	40.8	5.0	29.0	13.5	45.2	57.5
LnGrp LOS	D	A	C	B	D	E
Approach Vol, veh/h		1070	711		599	
Approach Delay, s/veh		18.7	25.3		54.7	
Approach LOS		B	C		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		102.1		27.9	47.1	55.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		86.0		36.0	31.0	51.0
Max Q Clear Time (g_c+I1), s		9.1		21.9	27.5	15.9
Green Ext Time (p_c), s		4.3		2.0	0.4	3.9

Intersection Summary						
HCM 6th Ctrl Delay, s/veh			29.8			
HCM 6th LOS			C			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	821	18	17	588	159	131	0	44	125	0	432
Future Volume (veh/h)	382	821	18	17	588	159	131	0	44	125	0	432
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1976
Adj Flow Rate, veh/h	402	864	19	18	619	167	138	0	46	132	0	455
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	626	1625	725	536	1444	731	278	0	107	190	0	0
Arrive On Green	0.35	0.45	0.45	0.30	0.40	0.40	0.15	0.00	0.07	0.05	0.00	0.00
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	0	1610	3510	132	
Grp Volume(v), veh/h	402	864	19	18	619	167	138	0	46	132	62.3	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1610	1755	E	
Q Serve(g_s), s	22.4	20.8	0.8	0.8	14.9	1.1	8.4	0.0	3.3	4.4		
Cycle Q Clear(g_c), s	22.4	20.8	0.8	0.8	14.9	1.1	8.4	0.0	3.3	4.4		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	626	1625	725	536	1444	731	278	0	107	190		
V/C Ratio(X)	0.64	0.53	0.03	0.03	0.43	0.23	0.50	0.00	0.43	0.70		
Avail Cap(c_a), veh/h	626	1625	725	536	1444	731	278	0	483	234		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	33.0	23.9	18.4	30.0	26.1	20.0	46.5	0.0	53.8	55.8		
Incr Delay (d2), s/veh	1.7	0.9	0.0	0.0	0.9	0.7	1.4	0.0	2.7	6.6		
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		
%ile BackOfQ(50%),veh/ln	9.5	8.3	0.3	0.4	6.2	3.0	3.9	0.0	1.4	2.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.6	24.8	18.4	30.1	27.0	20.7	47.9	0.0	56.5	62.3		
LnGrp LOS	C	C	B	C	C	C	D		E	E		
Approach Vol, veh/h		1285			804			184				
Approach Delay, s/veh		27.8			25.8			50.0				
Approach LOS		C			C			D				

Timer - Assigned Phs	1	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	39.5	58.0	22.5		45.5	52.0	10.5	12.0
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.6	54.0	6.0		12.0	48.0	8.0	36.0
Max Q Clear Time (g_c+I1), s	12.8	22.8	10.4		24.4	16.9	6.4	5.3
Green Ext Time (p_c), s	0.0	5.8	0.0		0.0	4.4	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	30.7
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	479	724	508	135	166	726
Future Volume (veh/h)	479	724	508	135	166	726
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1976
Adj Flow Rate, veh/h	504	762	535	142	175	764
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	438	2402	1416	1071	959	805
Arrive On Green	0.24	0.67	0.39	0.39	0.27	0.27
Sat Flow, veh/h	1810	3705	3705	1610	3510	2947
Grp Volume(v), veh/h	504	762	535	142	175	764
Grp Sat Flow(s),veh/h/ln	1810	1805	1805	1610	1755	1474
Q Serve(g_s), s	31.5	11.6	13.7	4.2	5.0	33.1
Cycle Q Clear(g_c), s	31.5	11.6	13.7	4.2	5.0	33.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	438	2402	1416	1071	959	805
V/C Ratio(X)	1.15	0.32	0.38	0.13	0.18	0.95
Avail Cap(c_a), veh/h	438	2402	1416	1071	972	816
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	49.3	9.2	28.2	8.0	36.1	46.4
Incr Delay (d2), s/veh	90.7	0.3	0.8	0.3	0.1	20.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.6	4.0	5.8	2.9	2.1	26.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	140.0	9.6	28.9	8.2	36.2	66.4
LnGrp LOS	F	A	C	A	D	E
Approach Vol, veh/h		1266	677		939	
Approach Delay, s/veh		61.5	24.6		60.8	
Approach LOS		E	C		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.5		39.5	35.5	55.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		86.0		36.0	31.0	51.0
Max Q Clear Time (g_c+I1), s		13.6		35.1	33.5	15.7
Green Ext Time (p_c), s		5.1		0.4	0.0	3.7

Intersection Summary						
HCM 6th Ctrl Delay, s/veh			52.6			
HCM 6th LOS			D			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	479	932	18	17	594	135	131	0	44	166	0	726
Future Volume (veh/h)	479	932	18	17	594	135	131	0	44	166	0	726
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1976
Adj Flow Rate, veh/h	504	981	19	18	625	142	138	0	46	175	0	764
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	603	1625	725	513	1444	752	302	0	107	235	0	0
Arrive On Green	0.33	0.45	0.45	0.28	0.40	0.40	0.17	0.00	0.07	0.07	0.00	0.00
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	1810	0	1610	3510	175	
Grp Volume(v), veh/h	504	981	19	18	625	142	138	0	46	175	61.1	
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1810	0	1610	1755	E	
Q Serve(g_s), s	30.9	24.6	0.8	0.9	15.1	0.0	8.3	0.0	3.3	5.9		
Cycle Q Clear(g_c), s	30.9	24.6	0.8	0.9	15.1	0.0	8.3	0.0	3.3	5.9		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	603	1625	725	513	1444	752	302	0	107	235		
V/C Ratio(X)	0.84	0.60	0.03	0.04	0.43	0.19	0.46	0.00	0.43	0.75		
Avail Cap(c_a), veh/h	603	1625	725	513	1444	752	302	0	443	322		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	37.0	24.9	18.4	31.1	26.1	18.7	45.1	0.0	53.8	55.0		
Incr Delay (d2), s/veh	5.9	1.0	0.0	0.0	0.9	0.6	1.1	0.0	2.7	6.1		
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		
%ile BackOfQ(50%),veh/ln	13.7	9.9	0.3	0.4	6.2	2.4	3.8	0.0	1.4	2.7		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.9	25.9	18.4	31.2	27.1	19.3	46.2	0.0	56.5	61.1		
LnGrp LOS	D	C	B	C	C	B	D		E	E		
Approach Vol, veh/h		1504			785			184				
Approach Delay, s/veh		31.5			25.8			48.8				
Approach LOS		C			C			D				

Timer - Assigned Phs	1	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	38.0	58.0	24.0		44.0	52.0	12.0	12.0
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.6	54.0	6.0		12.0	48.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	12.9	26.6	10.3		32.9	17.1	7.9	5.3
Green Ext Time (p_c), s	0.0	6.7	0.0		0.0	4.3	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	32.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	479	932	18	17	594	135	131	0	44	166	0	726
Future Volume (veh/h)	479	932	18	17	594	135	131	0	44	166	0	726
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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	0	1976
Adj Flow Rate, veh/h	504	981	19	18	625	142	138	0	46	175	0	764
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	1170	1594	711	528	1444	752	302	0	107	235	0	0
Arrive On Green	0.33	0.44	0.44	0.29	0.40	0.40	0.17	0.00	0.07	0.07	0.00	0.00
Sat Flow, veh/h	3510	3610	1610	1810	3610	1610	1810	0	1610	3510	175	
Grp Volume(v), veh/h	504	981	19	18	625	142	138	0	46	175	61.1	
Grp Sat Flow(s),veh/h/ln	1755	1805	1610	1810	1805	1610	1810	0	1610	1755	E	
Q Serve(g_s), s	13.4	25.0	0.8	0.9	15.1	0.0	8.3	0.0	3.3	5.9		
Cycle Q Clear(g_c), s	13.4	25.0	0.8	0.9	15.1	0.0	8.3	0.0	3.3	5.9		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	1170	1594	711	528	1444	752	302	0	107	235		
V/C Ratio(X)	0.43	0.62	0.03	0.03	0.43	0.19	0.46	0.00	0.43	0.75		
Avail Cap(c_a), veh/h	1170	1594	711	528	1444	752	302	0	456	322		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	1.00	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	31.1	25.7	18.9	30.4	26.1	18.7	45.1	0.0	53.8	55.0		
Incr Delay (d2), s/veh	0.1	1.0	0.0	0.0	0.9	0.6	1.1	0.0	2.7	6.1		
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		
%ile BackOfQ(50%),veh/ln	5.4	10.1	0.3	0.4	6.2	2.4	3.8	0.0	1.4	2.7		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.3	26.7	19.0	30.4	27.1	19.3	46.2	0.0	56.5	61.1		
LnGrp LOS	C	C	B	C	C	B	D		E	E		
Approach Vol, veh/h		1504			785			184				
Approach Delay, s/veh		28.1			25.7			48.8				
Approach LOS		C			C			D				

Timer - Assigned Phs	1	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	39.0	57.0	24.0		44.0	52.0	12.0	12.0
Change Period (Y+Rc), s	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.6	53.0	7.0		11.0	48.0	11.0	34.0
Max Q Clear Time (g_c+I1), s	12.9	27.0	10.3		15.4	17.1	7.9	5.3
Green Ext Time (p_c), s	0.0	6.6	0.0		0.0	4.3	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	31.0
HCM 6th LOS	C

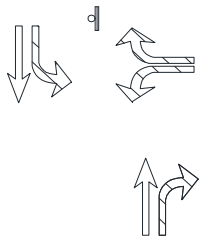
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : JOSHUA AVENUE
N/S STREET : ADELANTO ROAD
CONDITION : AM PEAK HOUR

INTERSECTION : 5
PROJECTED GROWTH PER YEAR : 3.5%

CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
JOSHUA AVENUE							
EB LEFT	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0
WB LEFT	0	0	0	9	9	0	9
WB THRU	0	0	0	0	0	0	0
WB RIGHT	0	0	0	0	0	0	0
ADELANTO ROAD							
NB LEFT	0	0	0	0	0	0	0
NB THRU	317	67	384	263	647	473	736
NB RIGHT	0	0	0	30	30	0	30
SB LEFT	0	0	0	0	0	0	0
SB THRU	94	20	114	82	196	174	256
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**411**	**87**	**498**	**384**	**882**	**647**	**1031**

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	0	647	30	0	196
Future Vol, veh/h	9	0	647	30	0	196
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	225	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	0	681	32	0	206

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	887	681	0	0	713	0
Stage 1	681	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	317	454	-	-	896	-
Stage 1	506	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	317	454	-	-	896	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	317	-	896	-
HCM Lane V/C Ratio	-	-	0.03	-	-	-
HCM Ctrl Dly (s/v)	-	-	16.7	0	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q (veh)	-	-	0.1	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	0	736	30	0	256
Future Vol, veh/h	9	0	736	30	0	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	225	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	0	775	32	0	269

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1044	775	0	0	807	0
Stage 1	775	-	-	-	-	-
Stage 2	269	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	256	401	-	-	827	-
Stage 1	458	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	401	-	-	827	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	781	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	19.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	256	-	827	-
HCM Lane V/C Ratio	-	-	0.037	-	-	-
HCM Ctrl Dly (s/v)	-	-	19.6	0	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q (veh)	-	-	0.1	-	0	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : JOSHUA AVENUE
N/S STREET : ADELANTO ROAD
CONDITION : PM PEAK HOUR

INTERSECTION : 5
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
JOSHUA AVENUE							
EB LEFT	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0
WB LEFT	0	0	0	33	33	0	33
WB THRU	0	0	0	0	0	0	0
WB RIGHT	0	0	0	0	0	0	0
ADELANTO ROAD							
NB LEFT	0	0	0	0	0	0	0
NB THRU	223	47	270	115	385	347	462
NB RIGHT	0	0	0	13	13	0	13
SB LEFT	0	0	0	0	0	0	0
SB THRU	196	41	237	298	535	357	655
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**419**	**88**	**507**	**459**	**966**	**704**	**1163**

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	0	385	13	0	535
Future Vol, veh/h	33	0	385	13	0	535
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	225	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	35	0	405	14	0	563

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	968	405	0	0	419	0
Stage 1	405	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	284	650	-	-	1151	-
Stage 1	678	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	284	650	-	-	1151	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	19.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	284	-	1151	-
HCM Lane V/C Ratio	-	-	0.122	-	-	-
HCM Ctrl Dly (s/v)	-	-	19.4	0	0	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q (veh)	-	-	0.4	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	0	462	13	0	655
Future Vol, veh/h	33	0	462	13	0	655
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	225	0	-	200	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	35	0	486	14	0	689

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1175	486	0	0	500	0
Stage 1	486	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	214	585	-	-	1075	-
Stage 1	623	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	214	585	-	-	1075	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	502	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	25.1	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	214	-	1075	-
HCM Lane V/C Ratio	-	-	0.162	-	-	-
HCM Ctrl Dly (s/v)	-	-	25.1	0	0	-
HCM Lane LOS	-	-	D	A	A	-
HCM 95th %tile Q (veh)	-	-	0.6	-	0	-

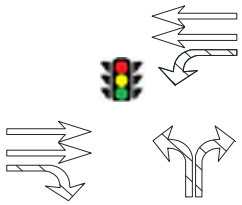
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : MESA LINDA ROAD
CONDITION : AM PEAK HOUR

INTERSECTION : 6
PROJECTED GROWTH PER YEAR : 3.5%

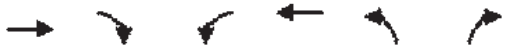
CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
AIR EXPRESSWAY							
EB LEFT	0	0	0	0	0	0	0
EB THRU	735	154	889	272	1161	1278	1550
EB RIGHT	0	0	0	147	147	0	147
WB LEFT	0	0	0	57	57	0	57
WB THRU	696	146	842	86	928	1036	1122
WB RIGHT	0	0	0	0	0	0	0
MESA LINDA ROAD							
NB LEFT	0	0	0	46	46	0	46
NB THRU	0	0	0	0	0	0	0
NB RIGHT	0	0	0	18	18	0	18
SB LEFT	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**1431**	**300**	**1731**	**626**	**2357**	**2314**	**2940**



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1161	147	57	928	46	18
Future Volume (veh/h)	1161	147	57	928	46	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1976	1976
Adj Flow Rate, veh/h	1222	155	60	977	48	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1930	861	78	2246	544	484
Arrive On Green	0.18	0.18	0.09	1.00	0.29	0.29
Sat Flow, veh/h	3705	1610	1810	3705	1882	1675
Grp Volume(v), veh/h	1222	155	60	977	48	19
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1882	1675
Q Serve(g_s), s	28.2	7.4	2.9	0.0	1.7	0.7
Cycle Q Clear(g_c), s	28.2	7.4	2.9	0.0	1.7	0.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1930	861	78	2246	544	484
V/C Ratio(X)	0.63	0.18	0.77	0.43	0.09	0.04
Avail Cap(c_a), veh/h	1930	861	382	2246	544	484
HCM Platoon Ratio	0.33	0.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	28.9	20.3	40.7	0.0	23.4	23.0
Incr Delay (d2), s/veh	1.5	0.4	13.1	0.5	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	2.6	1.5	0.2	0.8	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.3	20.7	53.7	0.5	23.7	23.2
LnGrp LOS	C	C	D	A	C	C
Approach Vol, veh/h	1377			1037	67	
Approach Delay, s/veh	29.2			3.6	23.5	
Approach LOS	C			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.9	52.1				60.0	30.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	19.0	33.0				56.0	26.0
Max Q Clear Time (g_c+I1), s	4.9	30.2				2.0	3.7
Green Ext Time (p_c), s	0.1	1.9				7.2	0.1

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		18.4
HCM 6th LOS		B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1550	147	57	1122	46	18
Future Volume (veh/h)	1550	147	57	1122	46	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1976	1976
Adj Flow Rate, veh/h	1632	155	60	1181	48	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1930	861	78	2246	544	484
Arrive On Green	0.36	0.36	0.09	1.00	0.29	0.29
Sat Flow, veh/h	3705	1610	1810	3705	1882	1675
Grp Volume(v), veh/h	1632	155	60	1181	48	19
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1882	1675
Q Serve(g_s), s	37.5	5.9	2.9	0.0	1.7	0.7
Cycle Q Clear(g_c), s	37.5	5.9	2.9	0.0	1.7	0.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1930	861	78	2246	544	484
V/C Ratio(X)	0.85	0.18	0.77	0.53	0.09	0.04
Avail Cap(c_a), veh/h	1930	861	382	2246	544	484
HCM Platoon Ratio	0.67	0.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	25.5	15.3	40.7	0.0	23.4	23.0
Incr Delay (d2), s/veh	4.0	0.4	12.0	0.7	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	2.0	1.4	0.2	0.8	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	29.4	15.7	52.7	0.7	23.7	23.2
LnGrp LOS	C	B	D	A	C	C
Approach Vol, veh/h	1787			1241	67	
Approach Delay, s/veh	28.2			3.2	23.5	
Approach LOS	C			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.9	52.1				60.0	30.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	19.0	33.0				56.0	26.0
Max Q Clear Time (g_c+I1), s	4.9	39.5				2.0	3.7
Green Ext Time (p_c), s	0.1	0.0				9.6	0.1

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		18.1	
HCM 6th LOS		B	

DAVID EVANS AND ASSOCIATES INC.

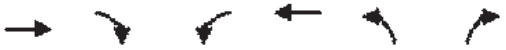
SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : AIR EXPRESSWAY
N/S STREET : MESA LINDA ROAD
CONDITION : PM PEAK HOUR

INTERSECTION : 6
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

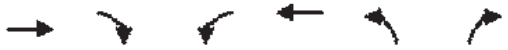
Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
AIR EXPRESSWAY							
EB LEFT	0	0	0	0	0	0	0
EB THRU	825	173	998	124	1122	1,205	1329
EB RIGHT	0	0	0	65	65	0	65
WB LEFT	0	0	0	25	25	0	25
WB THRU	790	166	956	307	1263	1,255	1562
WB RIGHT	0	0	0	0	0	0	0
MESA LINDA ROAD							
NB LEFT	0	0	0	167	167	0	167
NB THRU	0	0	0	0	0	0	0
NB RIGHT	0	0	0	63	63	0	63
SB LEFT	0	0	0	0	0	0	0
SB THRU	0	0	0	0	0	0	0
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**1615**	**339**	**1954**	**751**	**2705**	**2460**	**3211**



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1122	65	25	1263	167	63
Future Volume (veh/h)	1122	65	25	1263	167	63
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1157	67	26	1302	172	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1564	698	181	2086	603	537
Arrive On Green	0.87	0.87	0.20	1.00	0.33	0.33
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	1157	67	26	1302	172	65
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	10.7	0.5	1.1	0.0	6.3	2.5
Cycle Q Clear(g_c), s	10.7	0.5	1.1	0.0	6.3	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1564	698	181	2086	603	537
V/C Ratio(X)	0.74	0.10	0.14	0.62	0.29	0.12
Avail Cap(c_a), veh/h	1564	698	181	2086	603	537
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.83	0.83	1.00	1.00
Uniform Delay (d), s/veh	4.1	3.4	32.8	0.0	22.1	20.8
Incr Delay (d2), s/veh	2.9	0.3	0.3	1.2	1.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.2	0.4	0.3	2.8	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	7.0	3.7	33.1	1.2	23.3	21.3
LnGrp LOS	A	A	C	A	C	C
Approach Vol, veh/h	1224			1328	237	
Approach Delay, s/veh	6.9			1.8	22.7	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.0	43.0				56.0	34.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	9.0	39.0				52.0	30.0
Max Q Clear Time (g_c+I1), s	3.1	12.7				2.0	8.3
Green Ext Time (p_c), s	0.0	8.4				11.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	5.8
HCM 6th LOS	A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1329	65	25	1562	167	63
Future Volume (veh/h)	1329	65	25	1562	167	63
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	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	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	1370	67	26	1610	172	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	1564	698	181	2086	603	537
Arrive On Green	0.87	0.87	0.20	1.00	0.33	0.33
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	1370	67	26	1610	172	65
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	18.9	0.5	1.1	0.0	6.3	2.5
Cycle Q Clear(g_c), s	18.9	0.5	1.1	0.0	6.3	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1564	698	181	2086	603	537
V/C Ratio(X)	0.88	0.10	0.14	0.77	0.29	0.12
Avail Cap(c_a), veh/h	1564	698	181	2086	603	537
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.68	0.68	1.00	1.00
Uniform Delay (d), s/veh	4.7	3.4	32.8	0.0	22.1	20.8
Incr Delay (d2), s/veh	6.3	0.2	0.2	1.9	1.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.2	0.4	0.6	2.8	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	10.9	3.7	33.1	1.9	23.3	21.3
LnGrp LOS	B	A	C	A	C	C
Approach Vol, veh/h	1437			1636	237	
Approach Delay, s/veh	10.6			2.4	22.7	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.0	43.0				56.0	34.0
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	9.0	39.0				52.0	30.0
Max Q Clear Time (g_c+I1), s	3.1	20.9				2.0	8.3
Green Ext Time (p_c), s	0.0	8.8				16.1	0.7

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		7.4	
HCM 6th LOS		A	

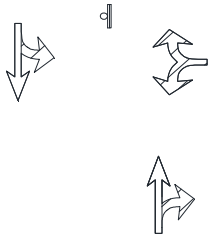
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : PROJECT DRIVEWAY #1
N/S STREET : ADELANTO ROAD
CONDITION : AM PEAK HOUR

INTERSECTION : 7
PROJECTED GROWTH PER YEAR : 3.5%

CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
PROJECT DRIVEWAY #1							
EB LEFT	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0
WB LEFT	0	0	0	1	1	0	1
WB THRU	0	0	0	0	0	0	0
WB RIGHT	0	0	0	2	2	0	2
ADELANTO ROAD							
NB LEFT	0	0	0	0	0	0	0
NB THRU	317	67	384	260	644	473	733
NB RIGHT	0	0	0	3	3	0	3
SB LEFT	0	0	0	4	4	0	4
SB THRU	94	20	114	81	195	174	255
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**411**	**87**	**498**	**351**	**849**	**647**	**998**

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	644	3	4	195
Future Vol, veh/h	1	2	644	3	4	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	2	678	3	4	205

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	893	680	0	0	681	0
Stage 1	680	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	315	454	-	-	921	-
Stage 1	507	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	454	-	-	921	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.2	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	921	-
HCM Lane V/C Ratio	-	-	0.008	0.005	-
HCM Ctrl Dly (s/v)	-	-	14.2	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q (veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	2	733	3	4	255
Future Vol, veh/h	1	2	733	3	4	255
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	2	772	3	4	268

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1050	774	0	0	775	0
Stage 1	774	-	-	-	-	-
Stage 2	276	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	254	402	-	-	850	-
Stage 1	458	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	252	402	-	-	850	-
Mov Cap-2 Maneuver	252	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	15.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	335	850	-
HCM Lane V/C Ratio	-	-	0.009	0.005	-
HCM Ctrl Dly (s/v)	-	-	15.8	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q (veh)	-	-	0	0	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : PROJECT DRIVEWAY #1
N/S STREET : ADELANTO ROAD
CONDITION : PM PEAK HOUR

INTERSECTION : 7
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
PROJECT DRIVEWAY #1							
EB LEFT	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0
WB LEFT	0	0	0	4	4	0	4
WB THRU	0	0	0	0	0	0	0
WB RIGHT	0	0	0	5	5	0	5
ADELANTO ROAD							
NB LEFT	0	0	0	0	0	0	0
NB THRU	223	47	270	114	384	347	461
NB RIGHT	0	0	0	1	1	0	1
SB LEFT	0	0	0	2	2	0	2
SB THRU	196	41	237	294	531	357	651
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**419**	**88**	**507**	**420**	**927**	**704**	**1124**

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	5	384	1	2	531
Future Vol, veh/h	4	5	384	1	2	531
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	5	404	1	2	559

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	968	405	0	0	405	0
Stage 1	405	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	284	650	-	-	1165	-
Stage 1	678	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	283	650	-	-	1165	-
Mov Cap-2 Maneuver	283	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	412	1165	-
HCM Lane V/C Ratio	-	-	0.023	0.002	-
HCM Ctrl Dly (s/v)	-	-	13.9	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q (veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	5	461	1	2	651
Future Vol, veh/h	4	5	461	1	2	651
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	5	485	1	2	685

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1175	486	0	0	486	0
Stage 1	486	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	214	585	-	-	1087	-
Stage 1	623	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	585	-	-	1087	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	329	1087	-
HCM Lane V/C Ratio	-	-	0.029	0.002	-
HCM Ctrl Dly (s/v)	-	-	16.3	8.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q (veh)	-	-	0.1	0	-

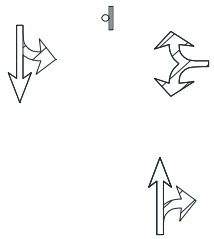
DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : PROJECT DRIVEWAY #2
N/S STREET : ADELANTO ROAD
CONDITION : AM PEAK HOUR

INTERSECTION : 8
PROJECTED GROWTH PER YEAR : 3.5%

CONDITION DIAGRAMS



PROJECT GEOMETRICS

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	1		3		5	7	9
PROJECT DRIVEWAY #2							
EB LEFT	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0
WB LEFT	0	0	0	2	2	0	2
WB THRU	0	0	0	0	0	0	0
WB RIGHT	0	0	0	4	4	0	4
ADELANTO ROAD							
NB LEFT	0	0	0	0	0	0	0
NB THRU	317	33	350	260	610	473	733
NB RIGHT	0	0	0	2	2	0	2
SB LEFT	0	0	0	4	4	0	4
SB THRU	94	10	104	83	187	174	257
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**411**	**43**	**454**	**355**	**809**	**647**	**1002**

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	610	2	4	187
Future Vol, veh/h	2	4	610	2	4	187
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	642	2	4	197

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	848	643	0	0	644	0
Stage 1	643	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	334	477	-	-	951	-
Stage 1	527	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	332	477	-	-	951	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	830	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	951	-
HCM Lane V/C Ratio	-	-	0.015	0.004	-
HCM Ctrl Dly (s/v)	-	-	13.8	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q (veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	4	733	2	4	257
Future Vol, veh/h	2	4	733	2	4	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	4	772	2	4	271

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1052	773	0	0	774	0
Stage 1	773	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	253	402	-	-	851	-
Stage 1	459	-	-	-	-	-
Stage 2	773	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	251	402	-	-	851	-
Mov Cap-2 Maneuver	251	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	768	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	335	851	-
HCM Lane V/C Ratio	-	-	0.019	0.005	-
HCM Ctrl Dly (s/v)	-	-	16	9.3	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q (veh)	-	-	0.1	0	-

DAVID EVANS AND ASSOCIATES INC.

SUBJECT	BY	DATE	JOB NO.	SHEET OF
TURN MOVEMENTS	TMO	17-Jul-26	MKLT0000-0001	1 OF 2

E/W STREET : PROJECT DRIVEWAY #2
N/S STREET : ADELANTO ROAD
CONDITION : PM PEAK HOUR

INTERSECTION : 8
PROJECTED GROWTH PER YEAR : 3.5%

TURN MOVEMENTS

Condition	Existing Condition	Year 2030 Ambient Growth	Opening Year 2030 Condition	Project Trips	Opening Year 2030 + Project Condition	Future Year 2046 Condition	Future Year 2046 + Project Condition
Scenario #	2		4		6	8	10
PROJECT DRIVEWAY #2							
EB LEFT	0	0	0	0	0	0	0
EB THRU	0	0	0	0	0	0	0
EB RIGHT	0	0	0	0	0	0	0
WB LEFT	0	0	0	3	3	0	3
WB THRU	0	0	0	0	0	0	0
WB RIGHT	0	0	0	7	7	0	7
ADELANTO ROAD							
NB LEFT	0	0	0	0	0	0	0
NB THRU	223	23	246	118	364	347	465
NB RIGHT	0	0	0	1	1	0	1
SB LEFT	0	0	0	2	2	0	2
SB THRU	196	21	217	293	510	357	650
SB RIGHT	0	0	0	0	0	0	0
TOTALS	**419**	**44**	**463**	**424**	**887**	**704**	**1128**

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	7	364	1	2	510
Future Vol, veh/h	3	7	364	1	2	510
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	7	383	1	2	537

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	925	384	0	0	384	0
Stage 1	384	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	301	668	-	-	1186	-
Stage 1	693	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	300	668	-	-	1186	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	488	1186	-
HCM Lane V/C Ratio	-	-	0.022	0.002	-
HCM Ctrl Dly (s/v)	-	-	12.5	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	7	465	1	2	650
Future Vol, veh/h	3	7	465	1	2	650
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	7	489	1	2	684

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1178	490	0	0	490	0
Stage 1	490	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	213	582	-	-	1084	-
Stage 1	620	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	212	582	-	-	1084	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	382	1084	-
HCM Lane V/C Ratio	-	-	0.028	0.002	-
HCM Ctrl Dly (s/v)	-	-	14.7	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	0.1	0	-

DAVID EVANS AND ASSOCIATES INC.

Appendix F: Traffic Signal Warrant Analysis

INTERSECTION #3: AIR EXPRESSWAY AT EMERALD ROAD
EXISTING CONDITIONS

COUNT DATE 8-2-23
CALC TMO DATE 07-10-25
CHK TMO DATE 07-20-26

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph
Minor St: EMERALD RD (NORTH) — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)
☐ URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☒
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☒
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

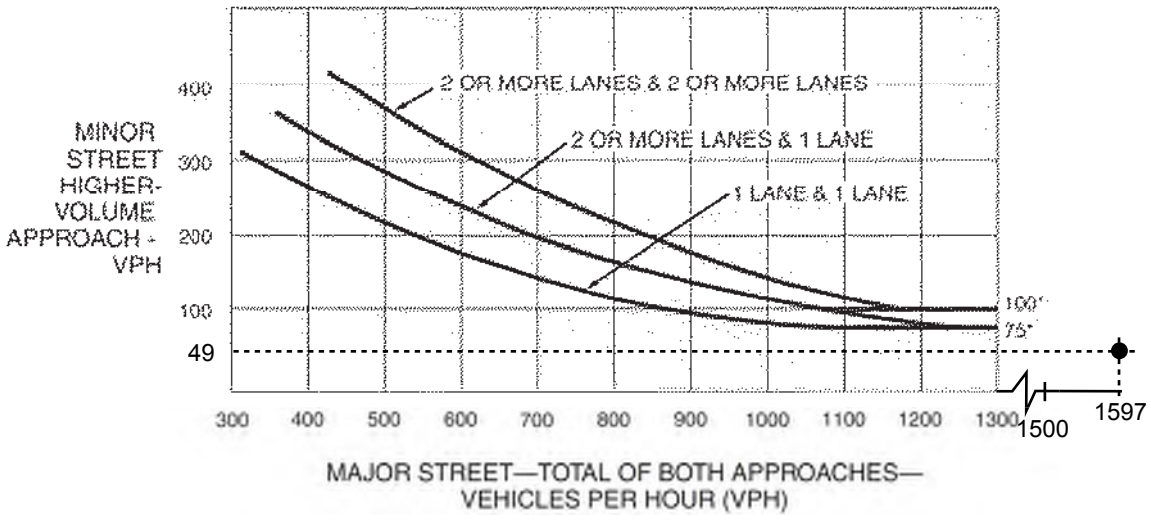
PART B SATISFIED YES ☐ NO ☒

APPROACH LANES	One	2 or More	4:30 - 5:30 PM Hour
Both Approaches - Major Street		X	1597
Higher Approach - Minor Street	X		49

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



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

INTERSECTION #3: AIR EXPRESSWAY AT EMERALD ROAD OPENING YEAR 2030 CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK _____ DATE _____

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph

Minor St: EMERALD RD (NORTH) — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☒

(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☐ NO ☒

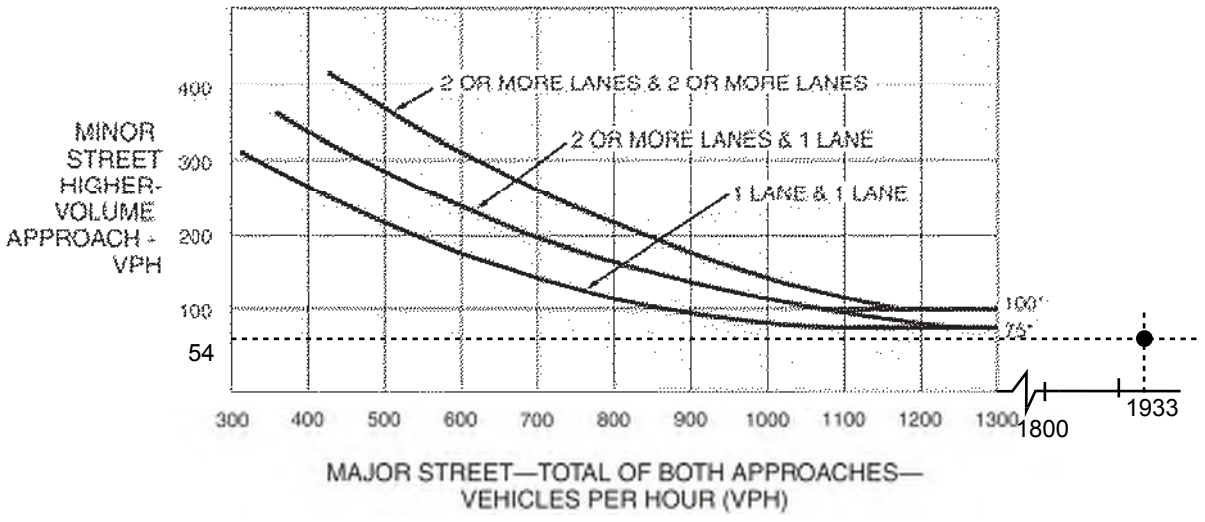
APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street		X	1933
Higher Approach - Minor Street	X		59

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

INTERSECTION #3: AIR EXPRESSWAY AT EMERALD ROAD OPENING YEAR 2030 + PROJECT CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK _____ DATE _____

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph

Minor St: EMERALD RD (NORTH) — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☒ NO ☐

(Part A or Part B must be satisfied)

PART A SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☒ NO ☐

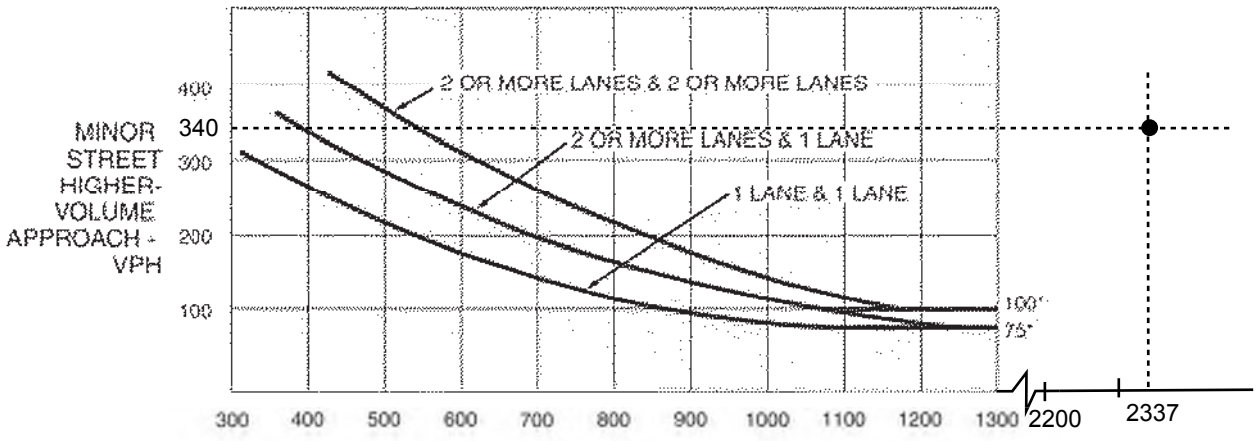
APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street		X	2337
Higher Approach - Minor Street	X		340

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

INTERSECTION #3: AIR EXPRESSWAY AT EMERALD ROAD
FUTURE YEAR 2046 CONDITIONS

COUNT DATE 8-2-23
CALC TMO DATE 07-10-25
CHK _____ DATE _____

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph
Minor St: EMERALD RD (NORTH) — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)
☐ URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☒
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☒
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

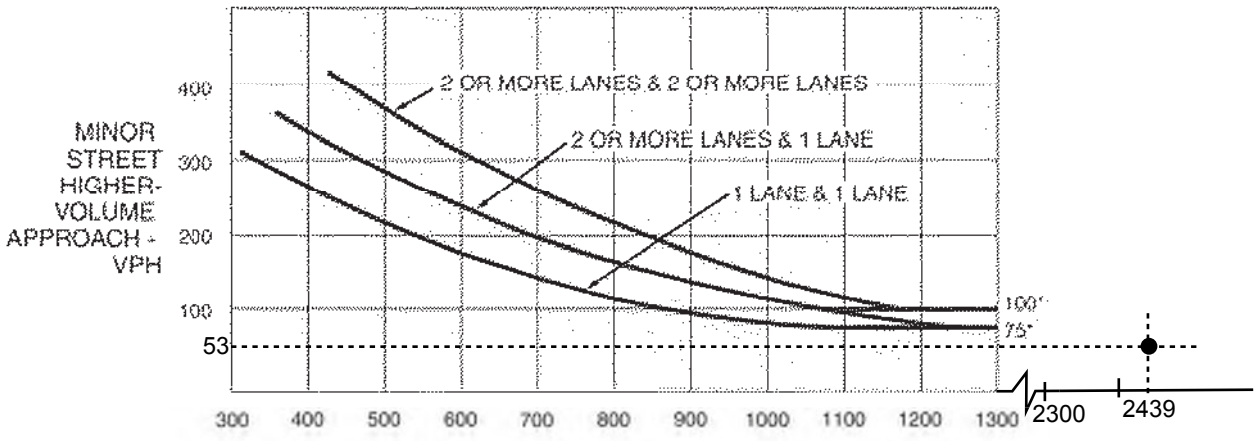
PART B SATISFIED YES ☐ NO ☒

APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street		X	2439
Higher Approach - Minor Street	X		53

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



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

INTERSECTION #3: AIR EXPRESSWAY AT EMERALD ROAD
FUTURE YEAR 2046 + PROJECT CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK _____ DATE _____

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph

Minor St: EMERALD RD (NORTH) — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☒ NO ☐

(Part A or Part B must be satisfied)

PART A SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☒ NO ☐

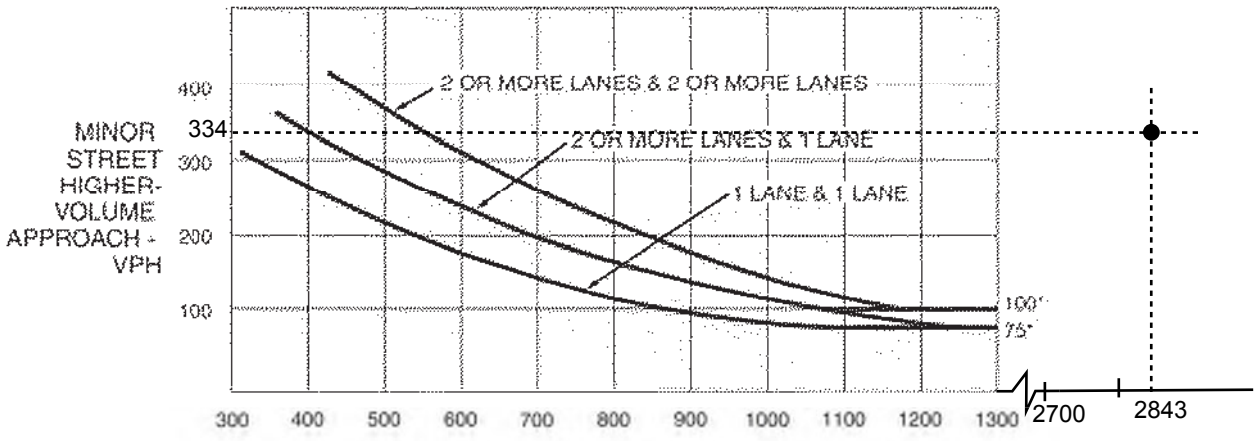
APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street		X	2843
Higher Approach - Minor Street	X		334

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

INTERSECTION #5: ADELANTO RD AT JOSHUA AVENUE
OPENING YEAR 2030 + PROJECT CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK TMO DATE 07-20-26

DIST CO RTE PM

Major St: ADELANTO RD — Critical Approach Speed 45 mph

Minor St: JOSHUA AVENUE — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☒

(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☐ NO ☒

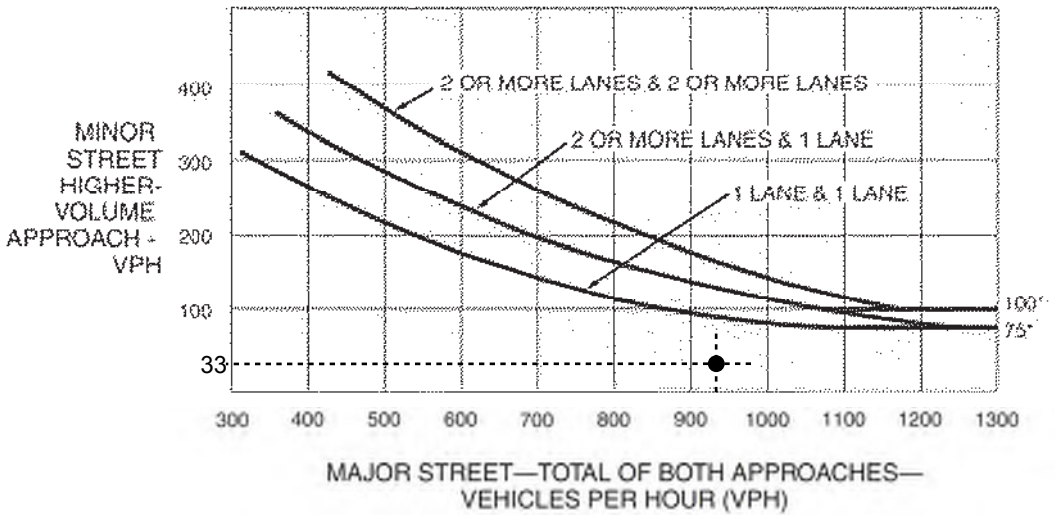
APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street	X		933
Higher Approach - Minor Street	X		33

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

INTERSECTION #5: ADELANTO RD AT JOSHUA AVENUE
FUTURE YEAR 2046 + PROJECT CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK _____ DATE _____

DIST CO RTE PM

Major St: ADELANTO RD — Critical Approach Speed 45 mph

Minor St: JOSHUA AVENUE — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

WARRANT 3 - Peak Hour — SATISFIED YES ☐ NO ☒

(Part A or Part B must be satisfied)

PART A — SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B — SATISFIED YES ☐ NO ☒

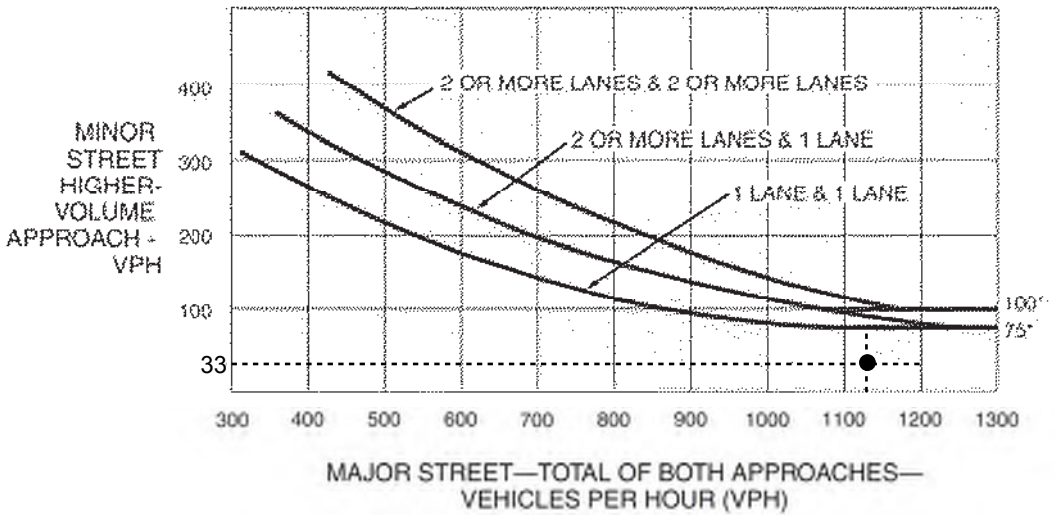
APPROACH LANES	One	2 or More	4:30 - 5:30 PM Hour
Both Approaches - Major Street	X		1130
Higher Approach - Minor Street	X		33

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

INTERSECTION #6: AIR EXPRESSWAY AT MESA LINDA ROAD
OPENING YEAR 2030 + PROJECT CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK TMO DATE 07-20-26

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph

Minor St: JOSHUA AVENUE — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ RURAL (R)

In built up area of isolated community of < 10,000 population ☐ URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☒ NO ☐

(Part A or Part B must be satisfied)

PART A SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☒ NO ☐

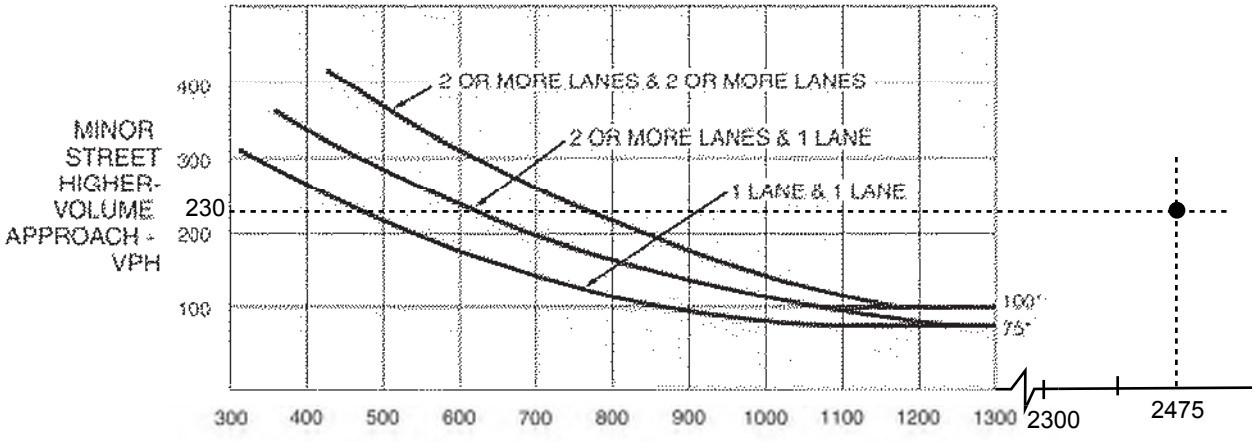
APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street		X	2475
Higher Approach - Minor Street	X		230

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

INTERSECTION #6: AIR EXPRESSWAY AT MESA LINDA ROAD
FUTURE YEAR 2046 + PROJECT CONDITIONS

COUNT DATE 8-2-23

CALC TMO DATE 07-10-25

CHK _____ DATE _____

DIST CO RTE PM

Major St: AIR EXPRESSWAY — Critical Approach Speed 60 mph

Minor St: JOSHUA AVENUE — Critical Approach Speed _____ mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or ☐ } RURAL (R)

In built up area of isolated community of < 10,000 population ☐ } URBAN (U)

WARRANT 3 - Peak Hour SATISFIED YES ☒ NO ☐

(Part A or Part B must be satisfied)

PART A SATISFIED YES ☒ NO ☐

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☒ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☒ NO ☐

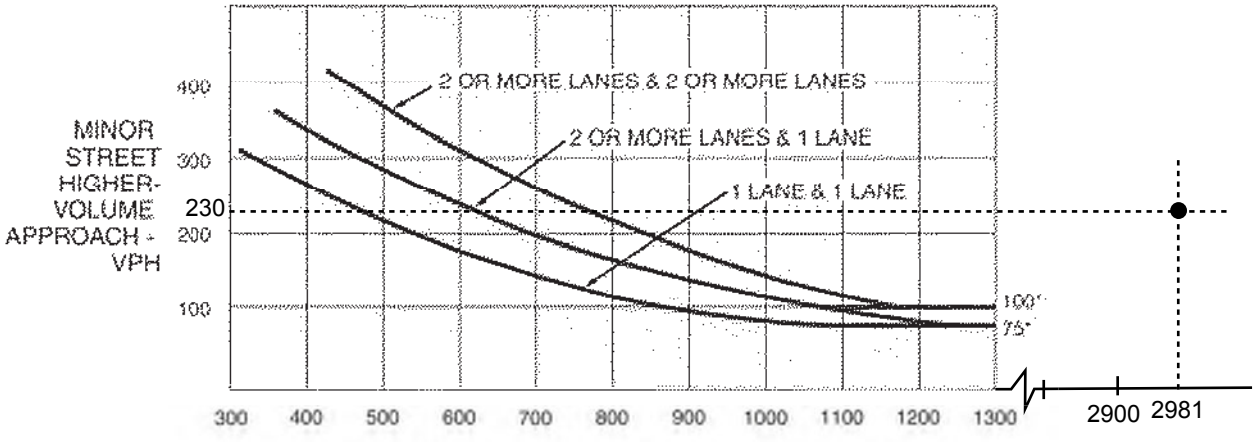
APPROACH LANES	One	2 or More	4:30 - 5:30 PM 1 Hour
Both Approaches - Major Street		X	2981
Higher Approach - Minor Street	X		230

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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

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



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

DAVID EVANS AND ASSOCIATES INC.

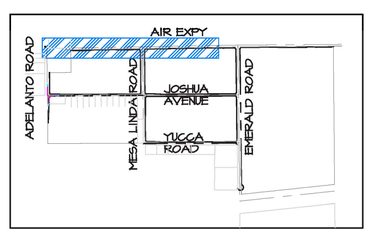
Appendix G: Conceptual Geometric Plans

(S) – SIGNALIZED INTERSECTION

N
W WEBB E
S

1" = 50'

50 0 50 100 150



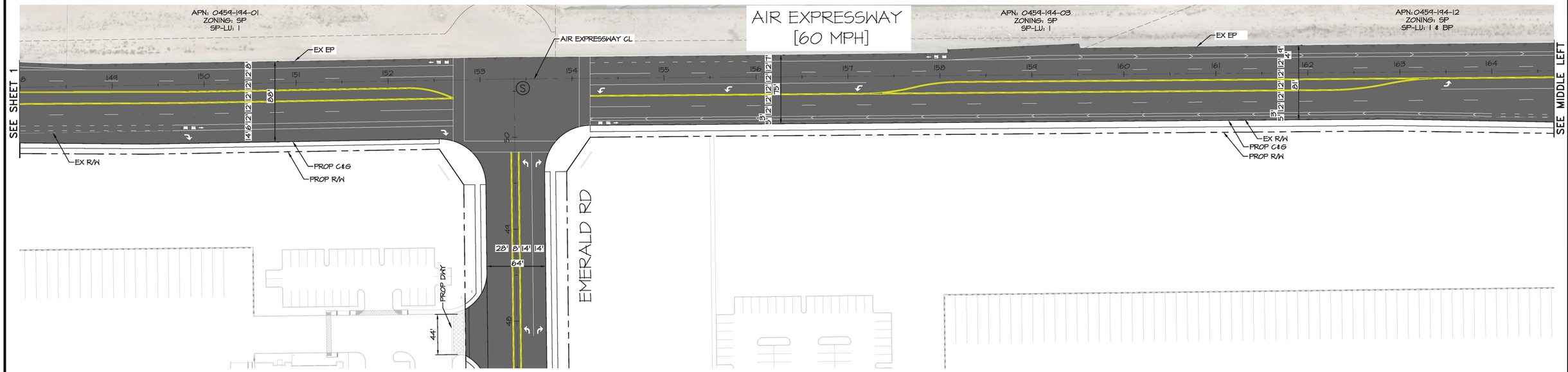
KEY MAP
NTS

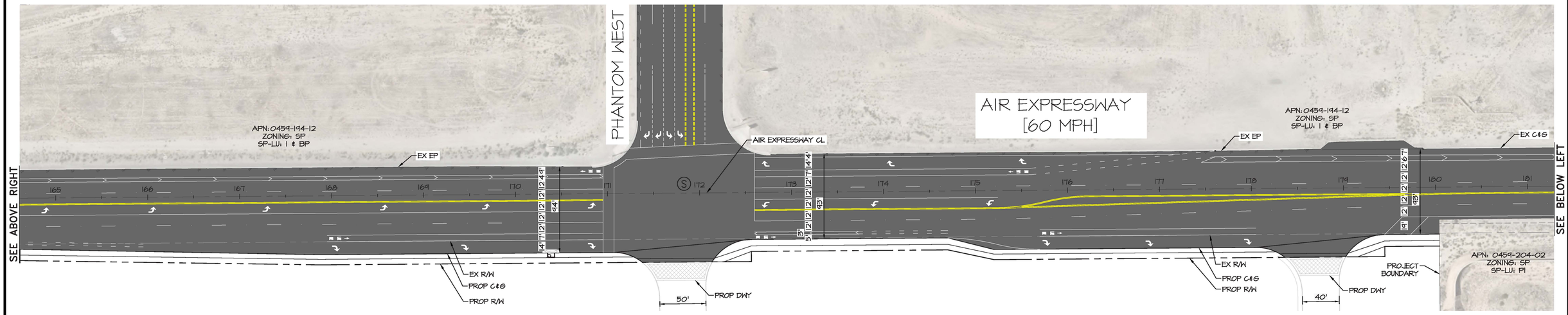
CITY OF ADELANTO

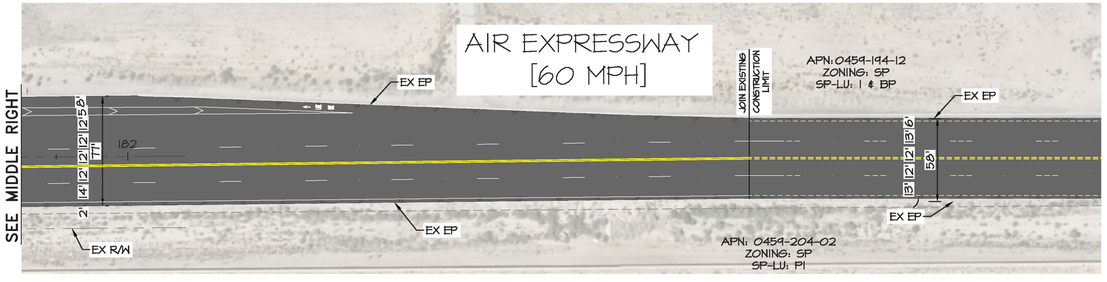
ADELANTO INDUSTRIAL PARK
BETWEEN ADELANTO RD AND 1000' EAST OF PHANTOM WEST
AIR EXPRESSWAY – CONCEPTUAL STRIPING

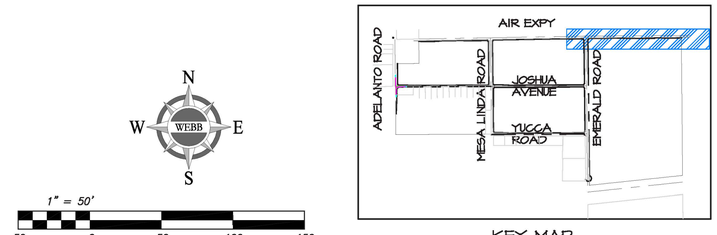
SCALE: 1" = 50'	ALBERT A. WEBB ASSOCIATES ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 2024-0505	
DATE: 4/20/2026		SHEET 4	
DESIGNED: ITM		OF 22 SHEETS	
CHECKED: NRL			
PLN CK REF:		DWG. NO.	
F.B.			

H:\2024\24-0505\DRAWINGS CAD\EXHIBITS\24-0505 CONCEPTUAL STRIPING.DWG 5/30/2025 1:37:01 PM mgriet









KEY MAP
NTS

N
W WEBB E
S

1" = 50'
50 0 50 100 150

CITY OF ADELANTO

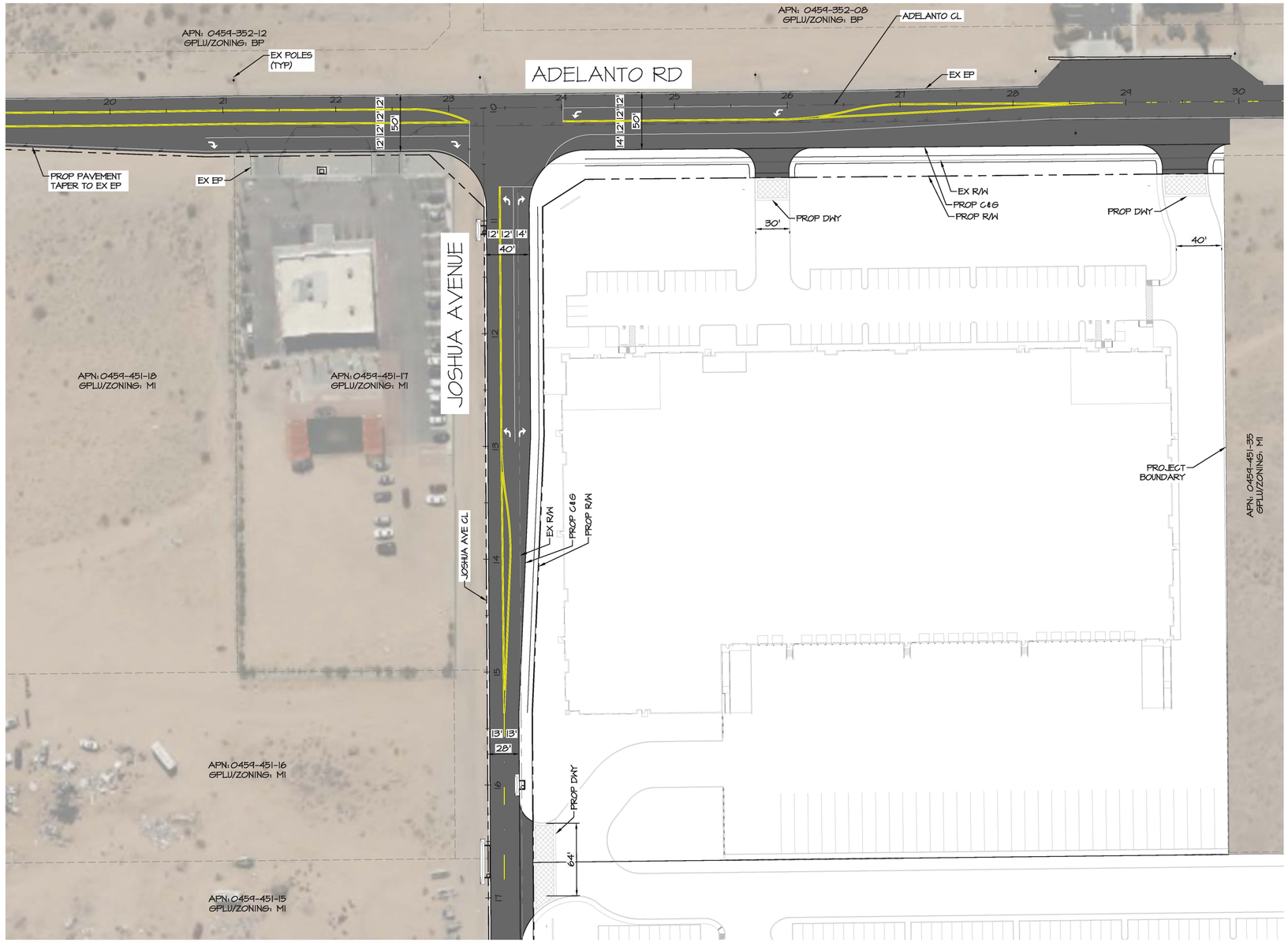
ADELANTO INDUSTRIAL PARK
BETWEEN ADELANTO RD AND 1000' EAST OF PHANTOM WEST
AIR EXPRESSWAY – CONCEPTUAL STRIPING

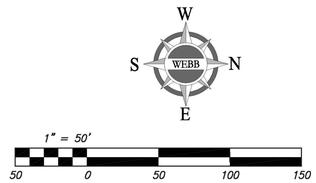
SCALE:	1" = 50'
DATE:	4/20/2026
DESIGNED:	ITM
CHECKED:	NRL
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	2024-0505
SHEET	5
OF	22 SHEETS
DWG. NO.	

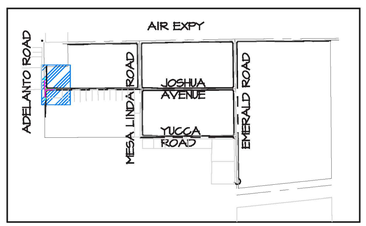
H:\2024\24-0505\DRAWINGS\CAD\EXHIBITS\24-0505 CONCEPTUAL STRIPING.DWG 5/30/2025 1:37:01 PM mgrdt





1" = 50'

50 0 50 100 150



KEY MAP
NTS

CITY OF ADELANTO

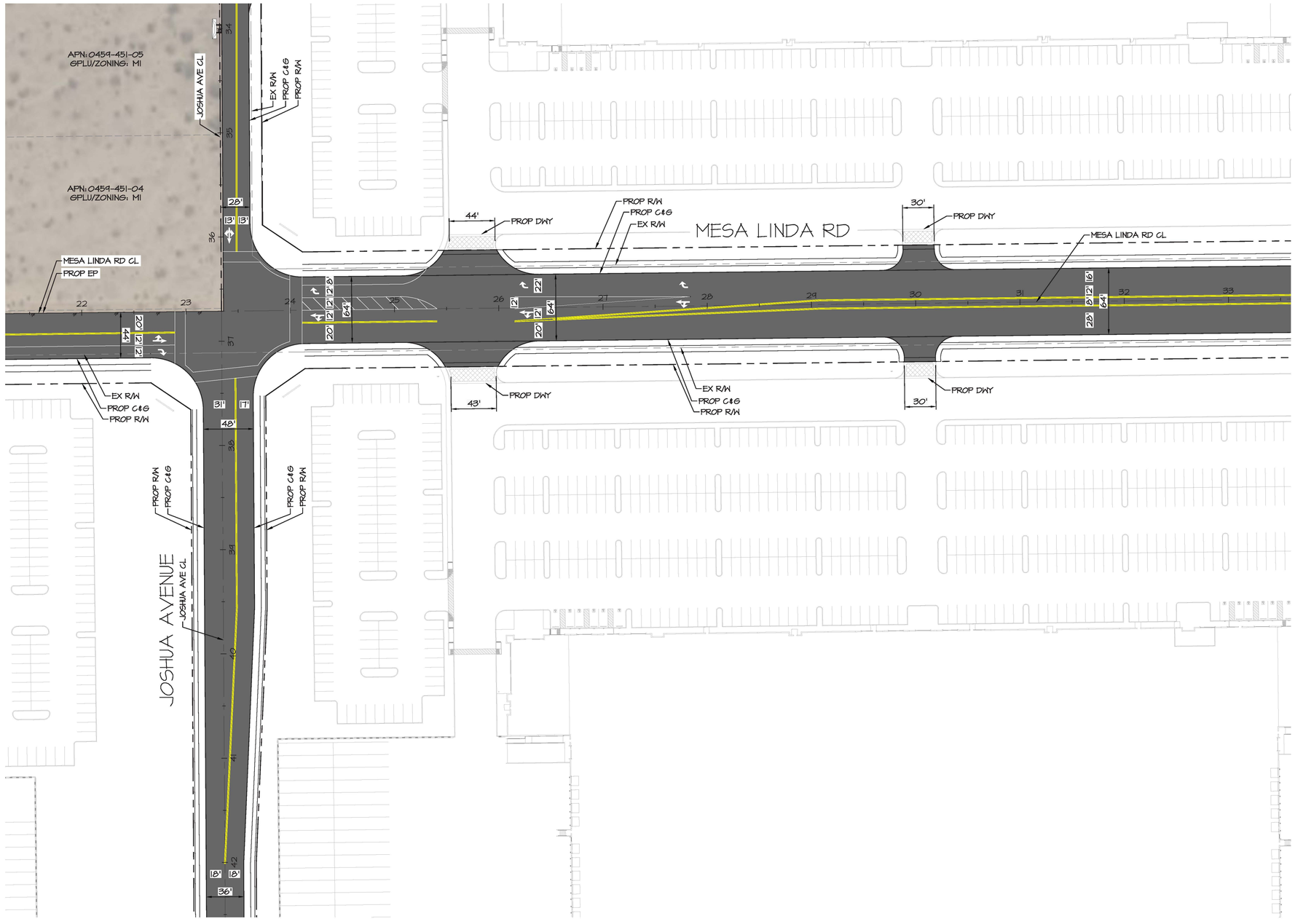
ADELANTO INDUSTRIAL PARK
LDP 24-04
ADELANTO & JOSHUA – CONCEPTUAL STRIPING

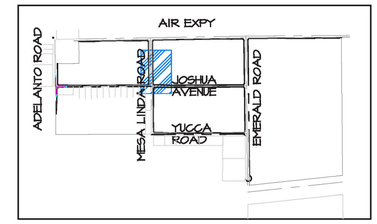
SCALE:	1" = 50'
DATE:	4/20/2026
DESIGNED:	ITM
CHECKED:	NRL
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	2024-0505
SHEET	6
OF	22 SHEETS
DWG. NO.	

H:\2024\24-0505\DRAWINGS CAD\EXHIBITS\24-0505 CONCEPTUAL STRIPING.DWG 5/30/2025 1:37:01 PM ingrid





KEY MAP
NTS

W S E N WEBB

1" = 50'
50 0 50 100 150

CITY OF ADELANTO

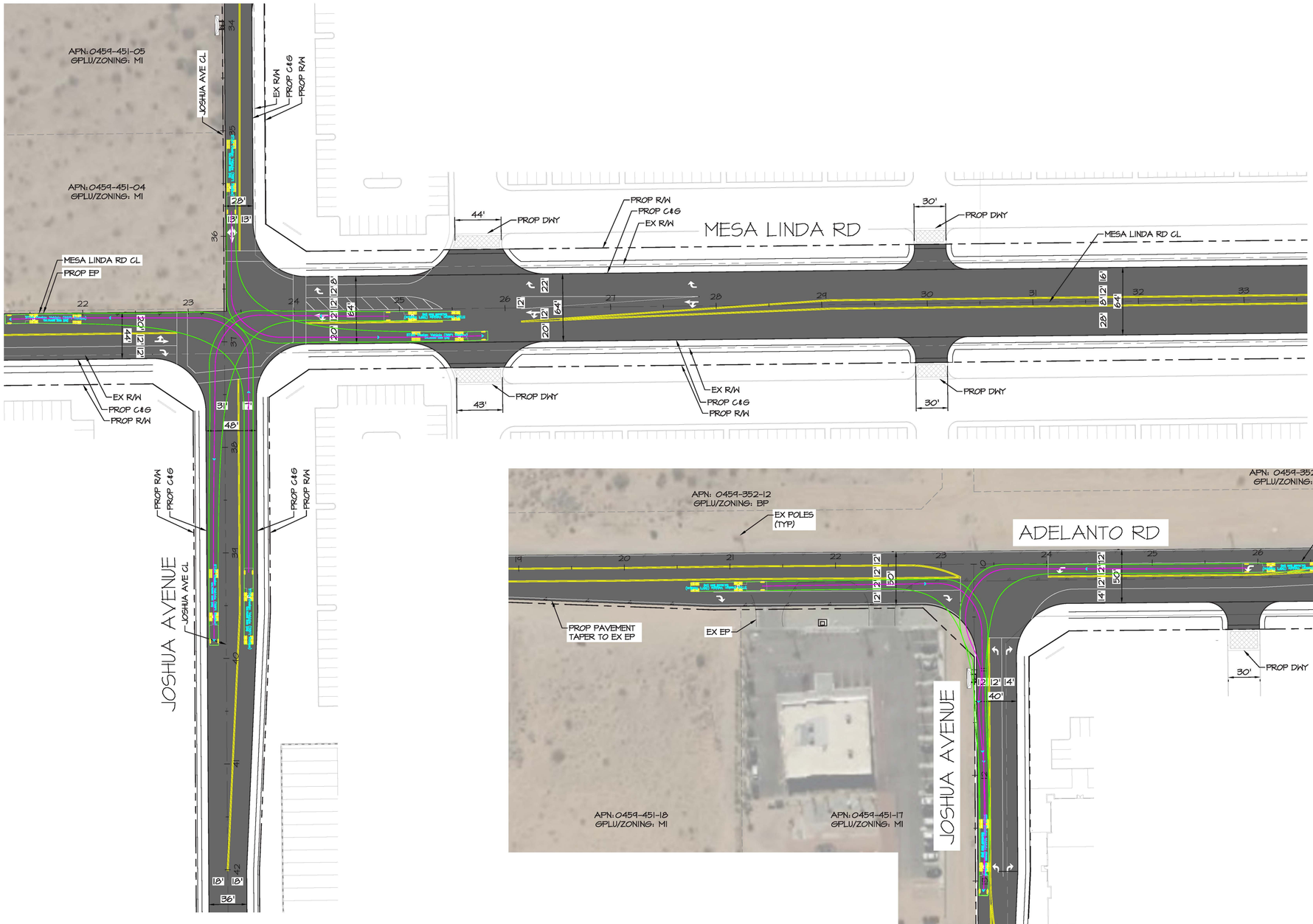
ADELANTO INDUSTRIAL PARK
LDP 24-04
MESA LINDA & JOSHUA – CONCEPTUAL STRIPING

SCALE:	1" = 50'
DATE:	4/20/2026
DESIGNED:	ITM
CHECKED:	NRL
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	2024-0505
SHEET	7
OF	22 SHEETS
DWG. NO.	

H:\2024\24-0505\DRAWINGS CAD\EXHIBITS\24-0505 CONCEPTUAL STRIPING.DWG 5/30/2025 1:37:01 PM ingrid



CITY OF ADELANTO

ADELANTO INDUSTRIAL PARK
LDP 24-04
CONCEPTUAL TRUCK TURNING

SCALE:	1" = 50'
DATE:	4/20/2026
DESIGNED:	ITM
CHECKED:	NRL
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	2024-0505
SHEET	8
OF	22 SHEETS
DWG. NO.	

H:\2024\24-0505\DRAWINGS CAD\EXHIBITS\24-0505 CONCEPTUAL STRIPING.DWG 5/30/2025 1:37:01 PM mgriet