

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE REVISED TRAFFIC IMPACT ANALYSIS

City of Hesperia

August 21, 2025



Traffic Engineering • Transportation Planning • Parking • Noise & Vibration
Air Quality • Global Climate Change • Health Risk Assessment

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE REVISED TRAFFIC IMPACT ANALYSIS

City of Hesperia

August 21, 2025

prepared by

Bryan Crawford
Giancarlo Ganddini, PE, PTP



GANDDINI GROUP, INC.

555 Parkcenter Drive, Suite 225
Santa Ana, California 92705
714.795.3100 | ganddini.com

Project No. 19522

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION.....	3
Purpose and Objectives	3
Historical Context.....	3
Project Description.....	3
Study Area.....	4
Analysis Scenarios	4
2. METHODOLOGY.....	7
Level of Service/General Plan Conformance (Non-CEQA).....	7
Intersection Delay Methodology	7
Performance Standards	8
Requirements for Improvements	8
Vehicle Miles Traveled Methodology (CEQA)	9
3. EXISTING CONDITIONS.....	10
Existing Roadway System	10
General Plan Context	10
Transit Service	10
Bicycle Facilities	10
Existing Pedestrian Facilities	10
Truck Routes	10
Existing Roadway Volumes	10
Existing Level of Service	11
4. PROJECT TRIP FORECASTS	22
Project Trip Generation	22
Truck Trips	22
Review of High-Cube Warehouse Rates.....	22
Project Trip Distribution and Assignment	23
Alternative Land Use Trip Generation	23
Trip Generation Comparison	24
5. FUTURE VOLUME FORECASTS	34
Cumulative Trips	34
Ambient Growth Rate.....	34
Other Development	34
General Plan Buildout (2040) Projections	34
Analysis Scenario Volume Forecasts	34
Opening Year (2027) Without Project	34
Opening Year (2027) With Project.....	35
General Plan Buildout (2040) Without Project	35
General Plan Buildout (2040) With Project	35
6. FUTURE OPERATIONAL ANALYSIS.....	49
Opening Year (2027) Without Project.....	49
Opening Year (2027) With Project	49
General Plan Buildout (2040) Without Project.....	49
General Plan Buildout (2040) With Project	49

Project Fair Share Contribution	50
7. SITE ACCESS AND CIRCULATION	57
Project Design Features.....	57
8. VEHICLES MILES TRAVELED	59
Background	59
Screening Assessment.....	59
Transit Priority Area (TPA) Screening	59
Low VMT Area Screening.....	60
Project Type Screening	62
Screening Assessment Finding	62
9. CONCLUSIONS	63
Project Trip Generation	63
Levels of Service	63
VMT Analysis	64

Appendices

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Trip Generation Comparison Analysis
Appendix E Level of Service Worksheets
Appendix F SBTAM Model Plots
Appendix G Post-Processing Worksheets

List of Tables

Table 1. Existing Levels of Service.....	12
Table 2. Project Trip Generation.....	25
Table 3. Alternative Land Use Trip Generation.....	26
Table 4. Project Trip Generation Comparison	27
Table 5. Other Development Trip Generation	36
Table 6. Opening Year (2027) Without Project Intersection Level of Service	51
Table 7. Opening Year (2027) With Project Intersection Levels of Service	52
Table 8. General Plan Buildout Year (2040) Without Project Intersection Level of Service	53
Table 9. General Plan Buildout Year (2040) With Project Intersection Level of Service.....	54
Table 10. Project Fair Share Contribution	55

List of Figures

Figure 1. Project Location Map.....	5
Figure 2. Site Plan	6
Figure 3. Existing Lane Geometry and Intersection Traffic Controls.....	13
Figure 4. City of Hesperia General Plan Circulation Element.....	14
Figure 5. City of Hesperia General Plan Roadway Cross-Sections	15
Figure 6. Victor Valley Transit Routes.....	16
Figure 7. City of Hesperia General Plan Non-Motorized Transportation Plan Map.....	17
Figure 8. Existing Pedestrian Facilities	18
Figure 9. City of Hesperia Truck Route Map	19

Figure 10.	Existing AM Peak Hour Intersection Turning Movement Volumes.....	20
Figure 11.	Existing PM Peak Hour Intersection Turning Movement Volumes	21
Figure 12.	Project Outbound Trip Distribution - Cars.....	28
Figure 13.	Project Inbound Trip Distribution - Cars	29
Figure 14.	Project Outbound Trip Distribution - Trucks	30
Figure 15.	Project Inbound Trip Distribution - Trucks	31
Figure 16.	Project AM Peak Hour Intersection Turning Movement Volumes	32
Figure 17.	Project PM Peak Hour Intersection Turning Movement Volumes	33
Figure 18.	Other Development Location Map	38
Figure 19.	Other Development AM Peak Hour Intersection Turning Movement Volumes	39
Figure 20.	Other Development PM Peak Hour Intersection Turning Movement Volumes.....	40
Figure 21.	Opening Year (2027) Without Project AM Peak Hour Intersection Turning Movement Volumes.....	41
Figure 22.	Opening Year (2027) Without Project PM Peak Hour Intersection Turning Movement Volumes.....	42
Figure 23.	Opening Year (2027) With Project AM Peak Hour Intersection Turning Movement Volumes.....	43
Figure 24.	Opening Year (2027) With Project PM Peak Hour Intersection Turning Movement Volumes.....	44
Figure 25.	General Plan Buildout (2040)) Without Project AM Peak Hour Intersection Turning Movement Volumes	45
Figure 26.	General Plan Buildout (2040) Without Project PM Peak Hour Intersection Turning Movement Volumes	46
Figure 27.	General Plan Buildout (2040) With Project AM Peak Hour Intersection Turning Movement Volumes	47
Figure 28.	General Plan Buildout (2040) Project PM Peak Hour Intersection Turning Movement Volumes.....	48
Figure 29.	Conceptual Striping Plan.....	56

EXECUTIVE SUMMARY

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The currently vacant site is proposed to be developed with a 499,850 square foot high-cube fulfillment center warehouse building. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2027.

The initial traffic impact analysis (TIA) for this proposed development was completed on August 18, 2022. The TIA was revised on February 10, 2023 to include a trip generation comparison analysis. Comments were received from TKE Engineering based on a review of the August 2022 TIA dated January 9, 2025. The comments can be summarized as stating that the August 2022 TIA needed to be updated to present day conditions. This revised TIA updates the August 2022 and February 2023 TIA's to current conditions based on the review comments from TKE Engineering.

Project Trip Generation

The proposed project is forecast to generate 1,083 daily Passenger Car Equivalents (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

Levels of Service

The study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
 - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
 - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

Vehicle Miles Traveled (VMT) Analysis

Based on review of the SBCTA VMT Screening Tool, the proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

1. INTRODUCTION

This section describes the purpose of this study and the project description. Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with technical terms related to transportation engineering and planning.

This section describes the purpose of this traffic impact analysis, project location, proposed development, and study area.

PURPOSE AND OBJECTIVES

The purpose of this traffic impact analysis is to assess potential transportation impacts resulting from development of the proposed project both in the context of the California Environmental Quality Act (CEQA) and City of Hesperia discretionary authority. This study has been prepared in consultation with the City of Hesperia as documented in Appendix B.

For CEQA purposes, this study evaluates the significance of project-related transportation impacts with respect to vehicle miles traveled (VMT) thresholds established by the City of Hesperia, as the lead agency, and identifies the appropriate measures to mitigate such impacts, if any. This study also evaluates non-CEQA impacts and the need for corrective measures, if necessary, relating to General Plan Level of Service standards.

HISTORICAL CONTEXT

The initial traffic impact analysis (TIA) for this proposed development was completed on August 18, 2022. The TIA was revised on February 10, 2023 to include a trip generation comparison analysis. Comments were received from TKE Engineering based on a review of the August 2022 TIA dated January 9, 2025. The comments can be summarized as stating that the August 2022 TIA needed to be updated to present day conditions. This revised TIA updates the August 2022 and February 2023 TIA's to current conditions based on the review comments from TKE Engineering.

PROJECT DESCRIPTION

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. Figure 1 shows the project location map.

The currently vacant site is proposed to be developed with a 499,714 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2027. Figure 2 illustrates the project site plan.

STUDY AREA

Based on the study intersections identified in the approved scoping agreement (Appendix B), the study area consists of the following study intersections within the City of Hesperia and California Department of Transportation jurisdictions:

<u>Study Intersections¹</u>	<u>Jurisdiction</u>
1. Amargosa Road (NS) at Palmetto Way (EW)	City of Hesperia
2. Key Pointe Drive (NS) at Amargosa Road (EW)	City of Hesperia
3. Key Pointe Drive (NS) at Main Street (EW)	City of Hesperia
4. I-15 SB Offramp (NS) at Main Street (EW)	Caltrans ²
5. I-15 NB Ramps (NS) at Main Street (EW)	Caltrans ²
6. Project West Driveway (NS) at Palmetto Way (EW)	City of Hesperia
7. Project Central Driveway (NS) at Palmetto Way (EW)	City of Hesperia
8. Project East Driveway (NS) at Palmetto Way (EW)	City of Hesperia

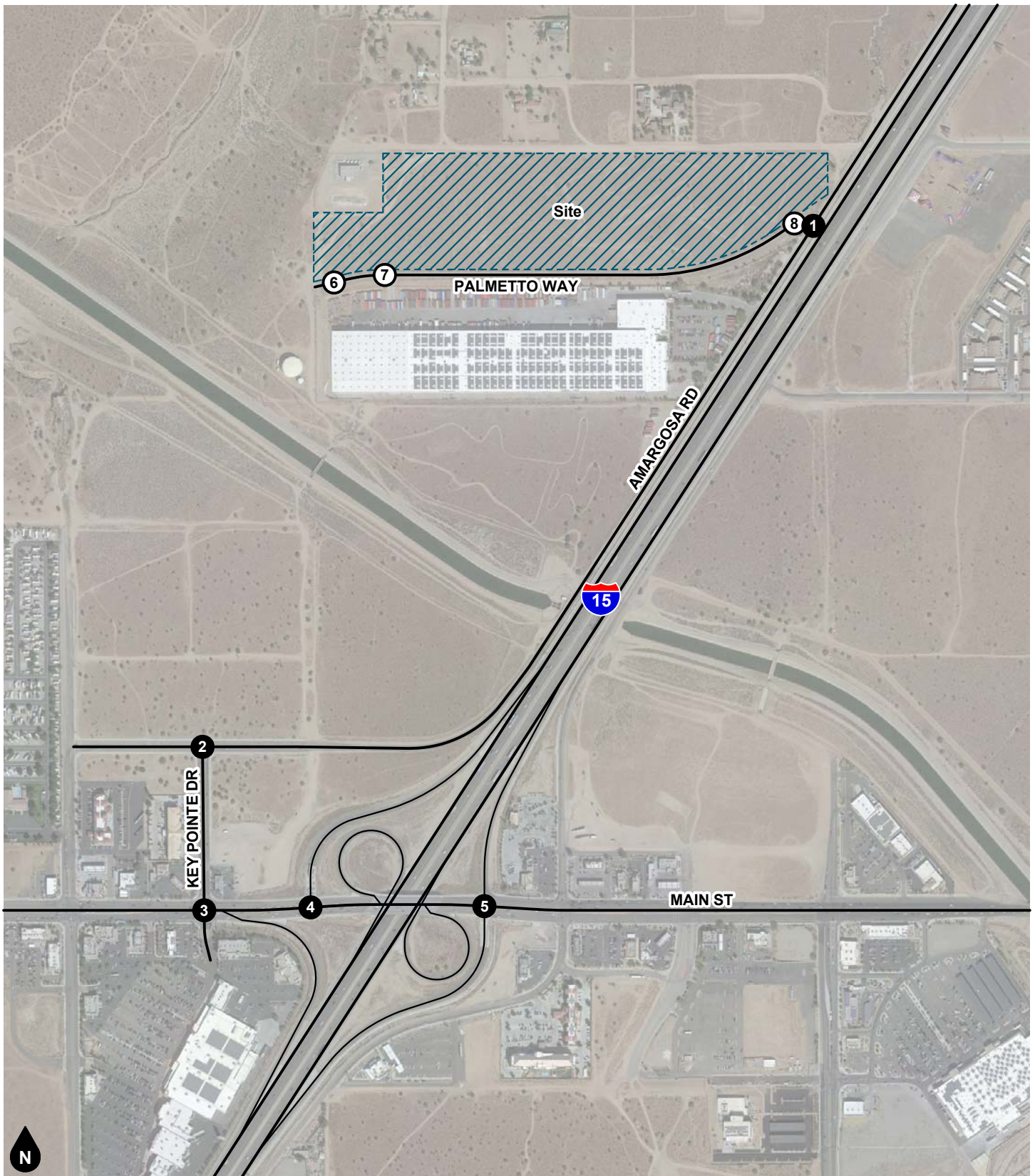
ANALYSIS SCENARIOS

The following scenarios are analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Opening Year (2027) Without Project
- Opening Year (2027) With Project
- General Plan Buildout (2040) Without Project
- General Plan Buildout (2040) With Project

¹ (NS) = north-south roadway; (EW) = east-west roadway; NB = Northbound; SB = Southbound

² Caltrans = California Department of Transportation



Legend

- # Study Intersection
- # Project Driveway

Figure 1
Project Location Map

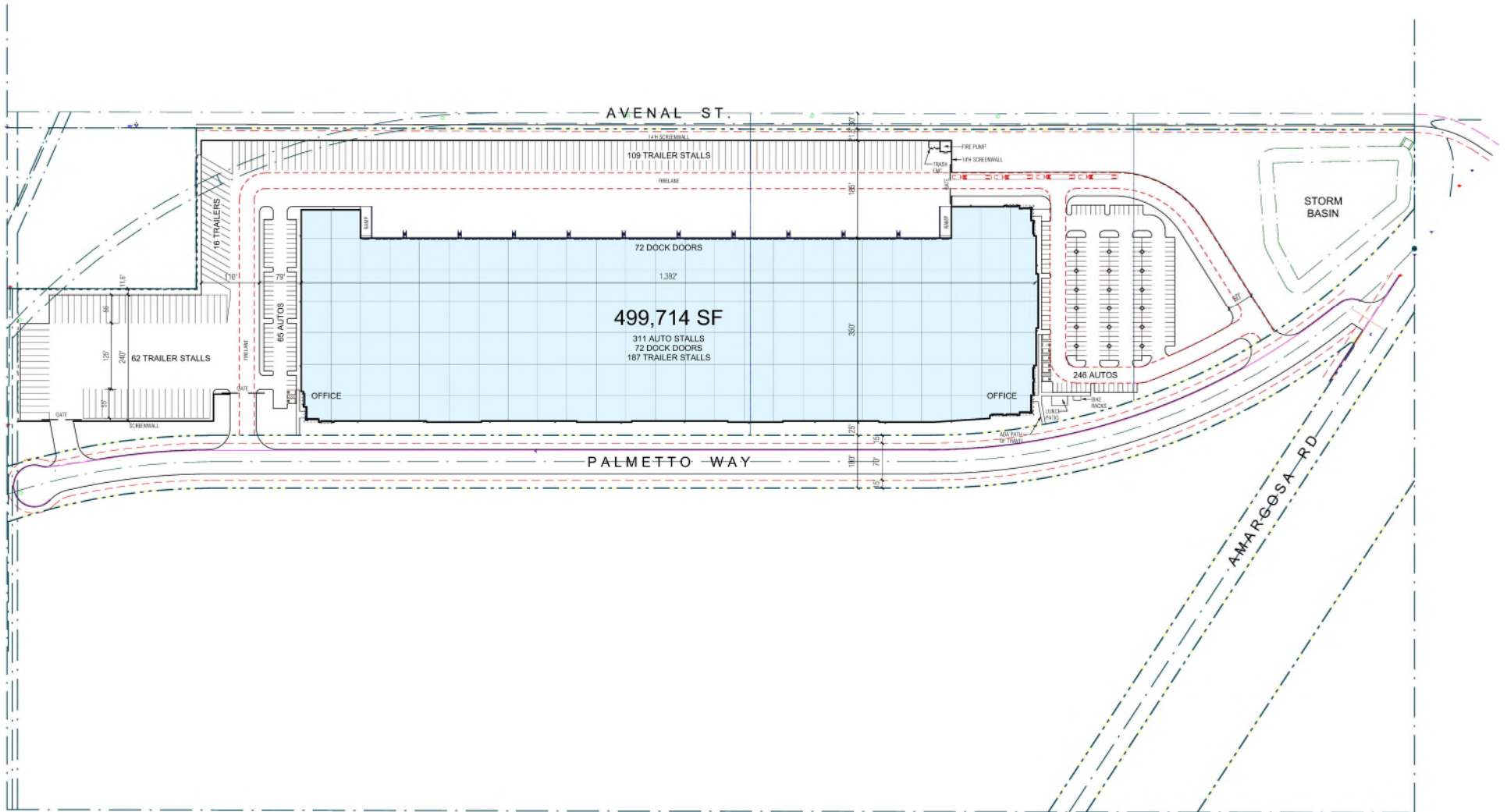


Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies. This traffic impact analysis was conducted in accordance with the guidelines established within the City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020).

LEVEL OF SERVICE/GENERAL PLAN CONFORMANCE (NON-CEQA)

Intersection Delay Methodology

The technique used to assess the performance of intersections is known as the intersection delay methodology based on the procedures contained in the *Highway Capacity Manual* (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, *Highway Capacity Manual* (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

In accordance with City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020), Existing and future conditions were analyzed using optimized signal timing between 60-130 seconds, 10 second minimum phase time, two seconds of lost time per critical phase, and Passenger Car Equivalent (PCE) factors of 1.5 for 2-axle, 2.0 for 3-axle, and 3.0 for 4+-axle. The following saturation flow rates were utilized for existing and opening year:

- 1,800 vehicles per hour for exclusive thru and exclusive right turn lanes
- 1,700 vehicles per hour for exclusive left turn lanes
- 1,600 vehicles per hour for exclusive dual left turn lanes
- 1,500 vehicles per hour for exclusive triple left turn lanes

For future scenarios (Future Year 2040) a peak hour factor of 0.95 was used along with the following saturation flow rates:

- 1,900 vehicles per hour for exclusive thru and exclusive right turn lanes
- 1,800 vehicles per hour for exclusive double right turn lanes
- 1,800 vehicles per hour for exclusive left turn lanes
- 1,700 vehicles per hour for exclusive dual left turn lanes
- 1,600 vehicles per hour for exclusive triple left turn lanes

Intersection delay analysis was performed using the Vistro software.

Performance Standards

City of Hesperia. The City of Hesperia has established LOS D as the minimum acceptable Level of Service along all City maintained roads (including intersections).

California Department of Transportation. As stated in the Guide for the Preparation of Traffic Impact Studies (State of California, 2002), "California Department of Transportation endeavors to maintain a target LOS [Level of Service] at the transition between LOS "C" and LOS "D" on State highway facilities". The California Department of Transportation acknowledges this may not always be feasible and recommends consultation with the California Department of Transportation to determine the appropriate target Level of Service. For consistency with local requirements, this analysis defines Level of Service D as the minimum acceptable Level of Service for State Highway facilities.

Requirements for Improvements

City of Hesperia. For study intersections within the City of Hesperia jurisdiction, a traffic impact occurs if:

- The addition of peak hour project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,
- The addition of peak hour project generated trips worsens the delay at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

If a project is forecast to cause an operational traffic impact, feasible improvements that will reduce the impact to an acceptable LOS are identified. Improvements can be in many forms, including the addition of lanes, traffic control modification, or demand management measures.

California Department of Transportation. Based on the established performance standards for City of Hesperia a potentially operational transportation impact is defined to occur if:

- The addition of project-generated trips is forecast to cause the performance of a study intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,
- The addition of project generated trips is forecast to worsen the performance of a study intersection operating at unacceptable Level of Service (E or F) in the baseline condition.

VEHICLE MILES TRAVELED METHODOLOGY (CEQA)

The methodology used to evaluate the impact of land use and transportation projects under CEQA is known as vehicle miles traveled (VMT). In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Additional information and a project assessment is provided in the “Vehicle Miles Traveled” section presented later in this report.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project site is provided by the I-15 Freeway located adjacent to the project site to the east. Key roadways providing local circulation include Key Pointe Drive, Amargosa Road, Palmetto Way, and Main Street.

GENERAL PLAN CONTEXT

Figure 4 shows the City of Hesperia General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Hesperia standard roadway cross-sections are illustrated on Figure 5.

TRANSIT SERVICE

Figure 7 shows Existing public transit facilities and routes in the project vicinity. As shown on Figure 6, the study area is currently served by Victor Valley Transit Routes 20 and 114 along Amargosa Road adjacent to the project site.

BICYCLE FACILITIES

The City of Hesperia Non-Motorized Transportation Plan is illustrated on Figure 7. This plan shows existing and proposed bike paths within the City of Hesperia. There are currently no existing bike routes adjacent to the project site. Main Street east of the I-15 Freeway is classified as a Class I Bike Path.

EXISTING PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown on Figure 8. Sidewalks are not provided on Amargosa Road adjacent to the project site.

TRUCK ROUTES

The City of Hesperia truck routes are shown on Figure 9. The City of Victorville General Plan does not identify Amargosa Road south of Bear Valley Road to the project site as a truck route.

EXISTING ROADWAY VOLUMES

Existing peak hour traffic conditions are based upon morning peak period and evening peak period intersection turning movement counts obtained in May 2022 during typical weekday conditions. The weekday morning peak period was counted between 7:00 AM and 9:00 AM, and the weekday evening peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C. Figure 10 and Figure 11 show the Existing AM and PM peak hour intersection turning movement volumes.

Since the initial traffic counts were conducted in 2022, these traffic counts were increased by an ambient growth rate of 2.0% per year over three years (1.061% total) to reflect existing 2025 conditions.

EXISTING LEVEL OF SERVICE

The intersection Levels of Service for Existing conditions have been calculated and are shown in Table 1. Detailed intersection Level of Service worksheets are provided in Appendix C.

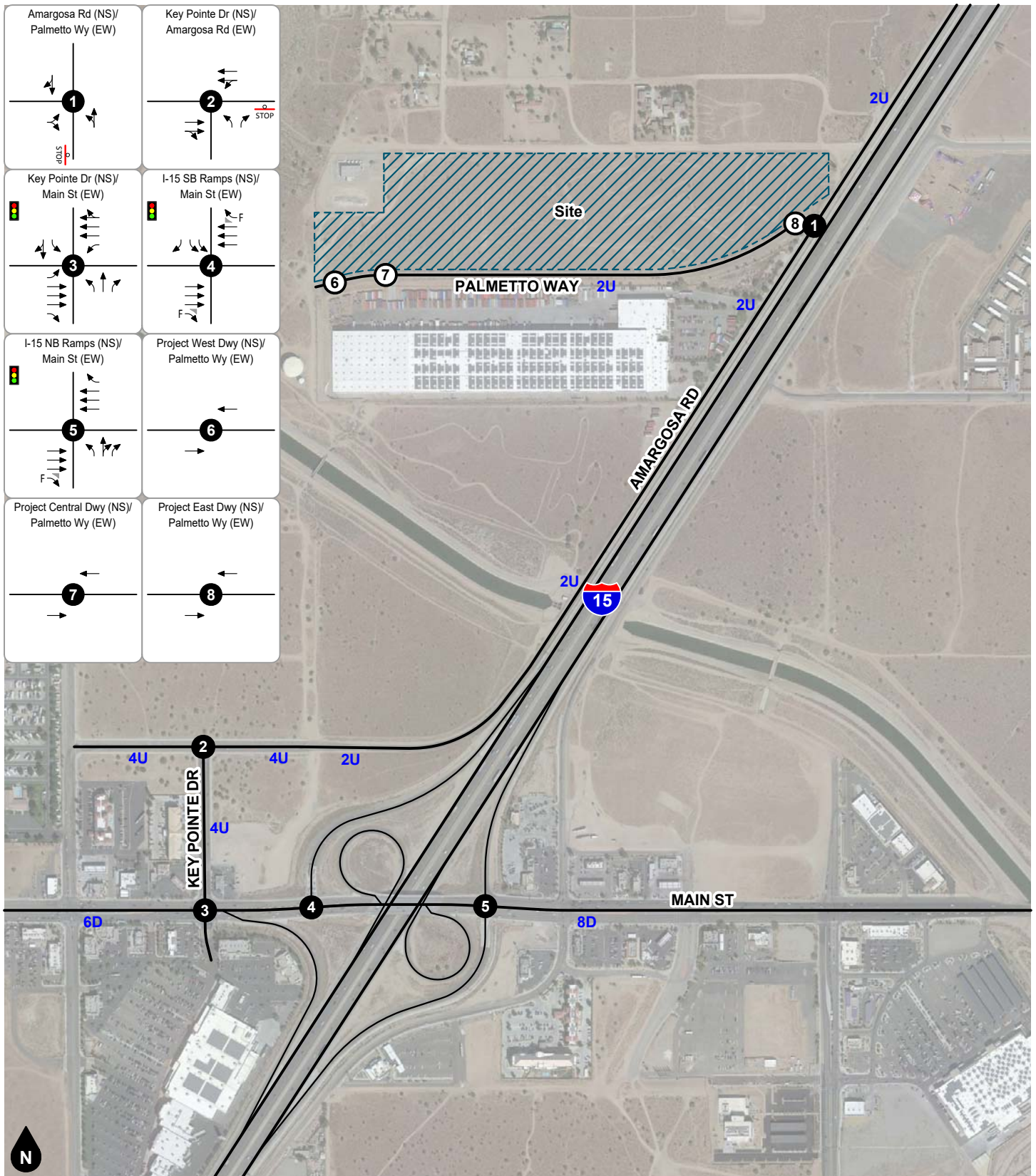
As shown in Table 1, the study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

Table 1
Existing Intersection Levels of Service

Study Intersection	Traffic Control ¹	AM Peak Hour		PM Peak Hour	
		Delay ²	LOS ³	Delay ²	LOS ³
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	8.8	A	9.7	A
3. Key Pointe Drive (NS) at Main Street (EW)	TS	15.1	B	24.2	C
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	8.4	A	11.2	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	4.3	A	12.9	B

Notes:

- (1) CSS = Cross Street Stop; TS = Traffic Signal
- (2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
- (3) LOS = Level of Service

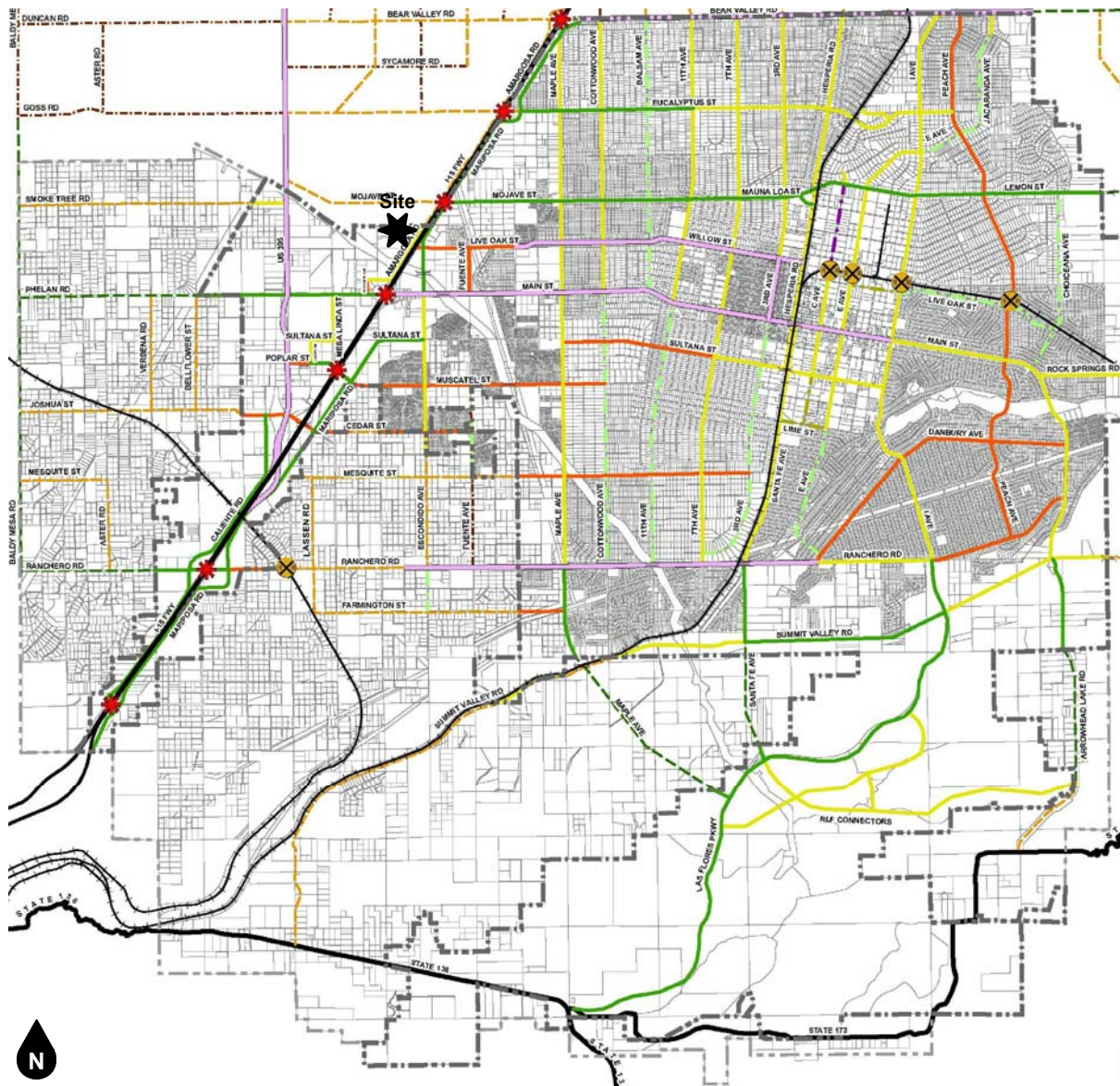


Legend

Traffic Signal
 Stop Sign
 #D #Lane Divided Roadway
 #U #Lane Undivided Roadway

Existing Lane
 F Free Right Turn Lane

Figure 3
Existing Lane Geometry and Intersection Traffic Controls



Arterials		(RoW) (Curb-Curb)	
Major Arterial	(120')	(104')*	(92')**
Arterial	(100')	(72')	
Secondary Arterial	(80')	(50')	
Industrial Collector	(70')	(46')**	
Suburban Collector	(60')	(36')**	
Rural Collector	(60')	(48')*	(40')**

Streets Outside City	
Major Arterial	
Arterial	
Collector	

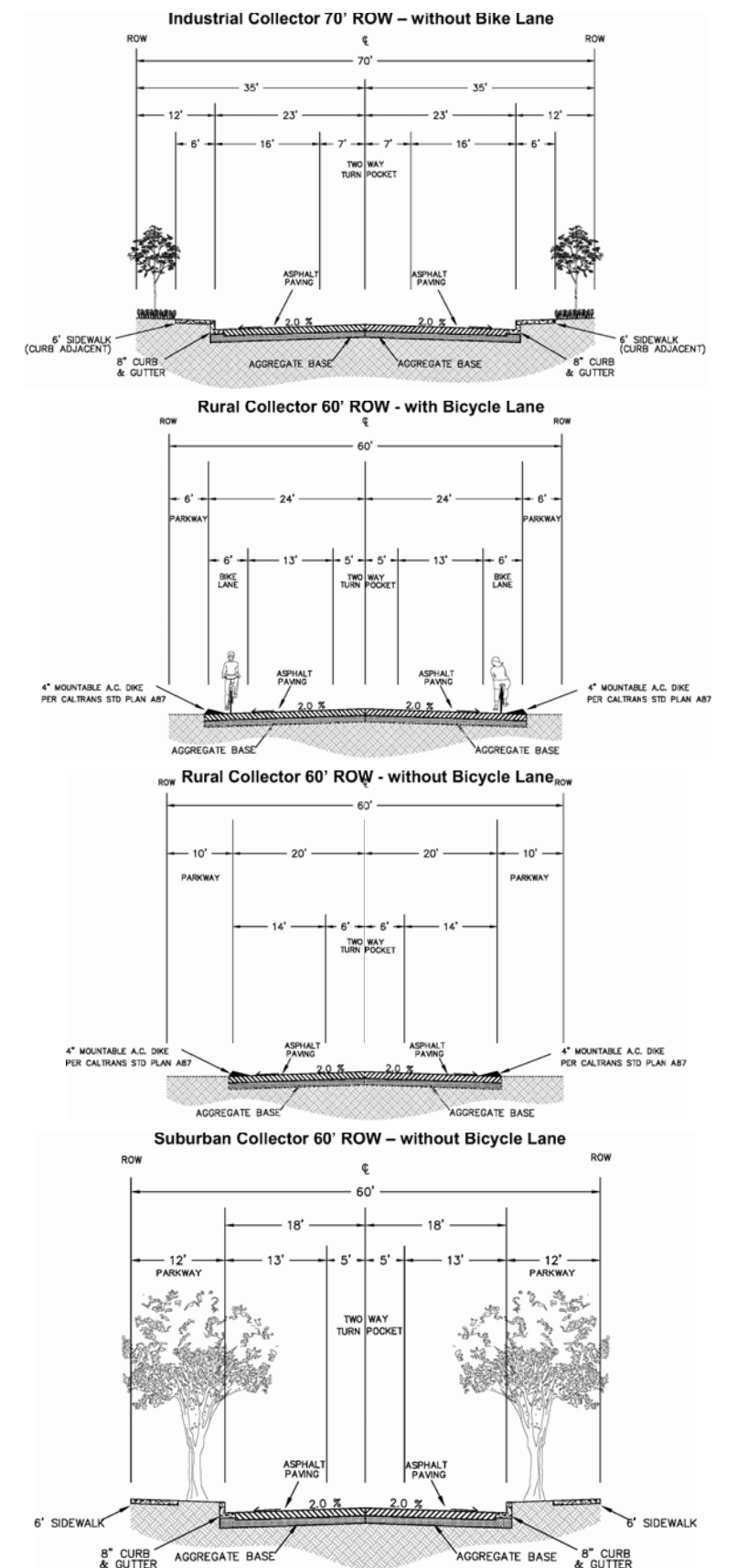
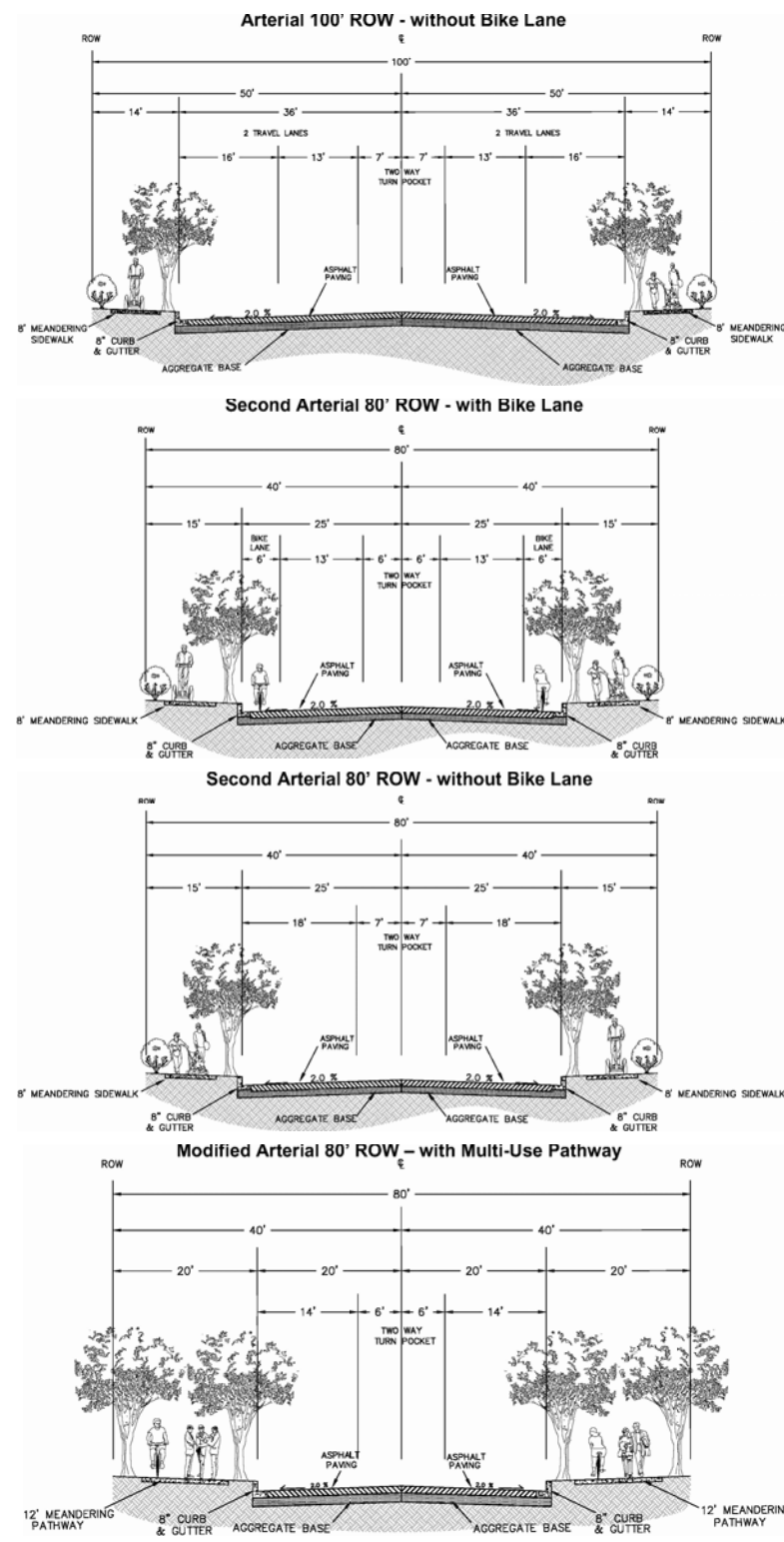
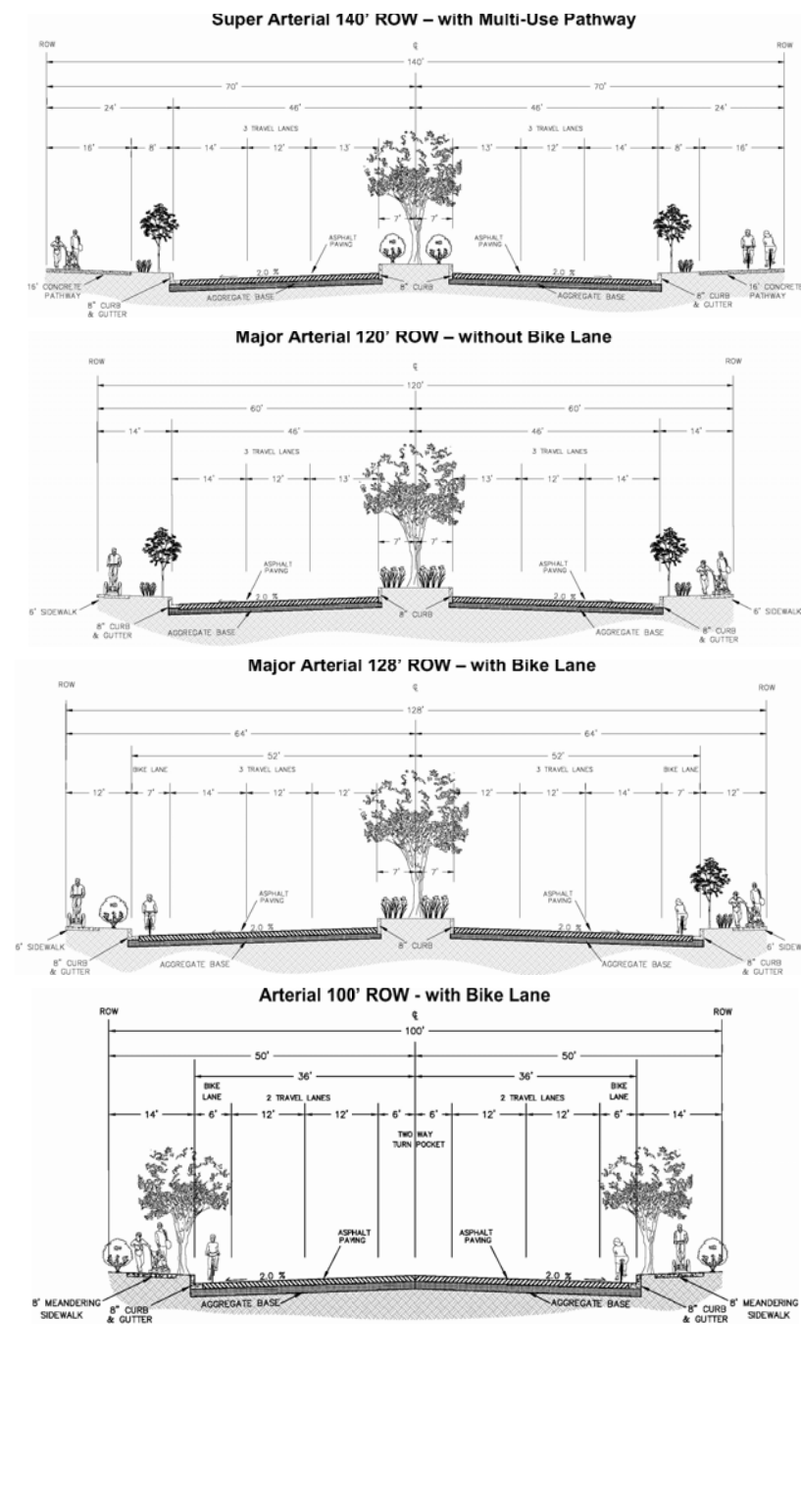
Misc.	
City Boundary	
Sphere of Influence	
Railroad	
At Grade Crossing	
Bridge/overcrossing/undercrossing	
Freeway Interchange	

Special Street Section	
Special Street	(RoW) (Curb-Curb)
Ranchero Road	(140') (92')
Highway 395	(130') (106')
Bear Valley Road (halfwidth)	(64') (45')
Enhanced 3rd Avenue	(100') (76')
Main Street Corridor "A"	(120') (88')
Main Street Corridor "B"	(105') (70')
Modified Live Oak-Willow St	(80') (40')

* with bike lane
** without bike lane

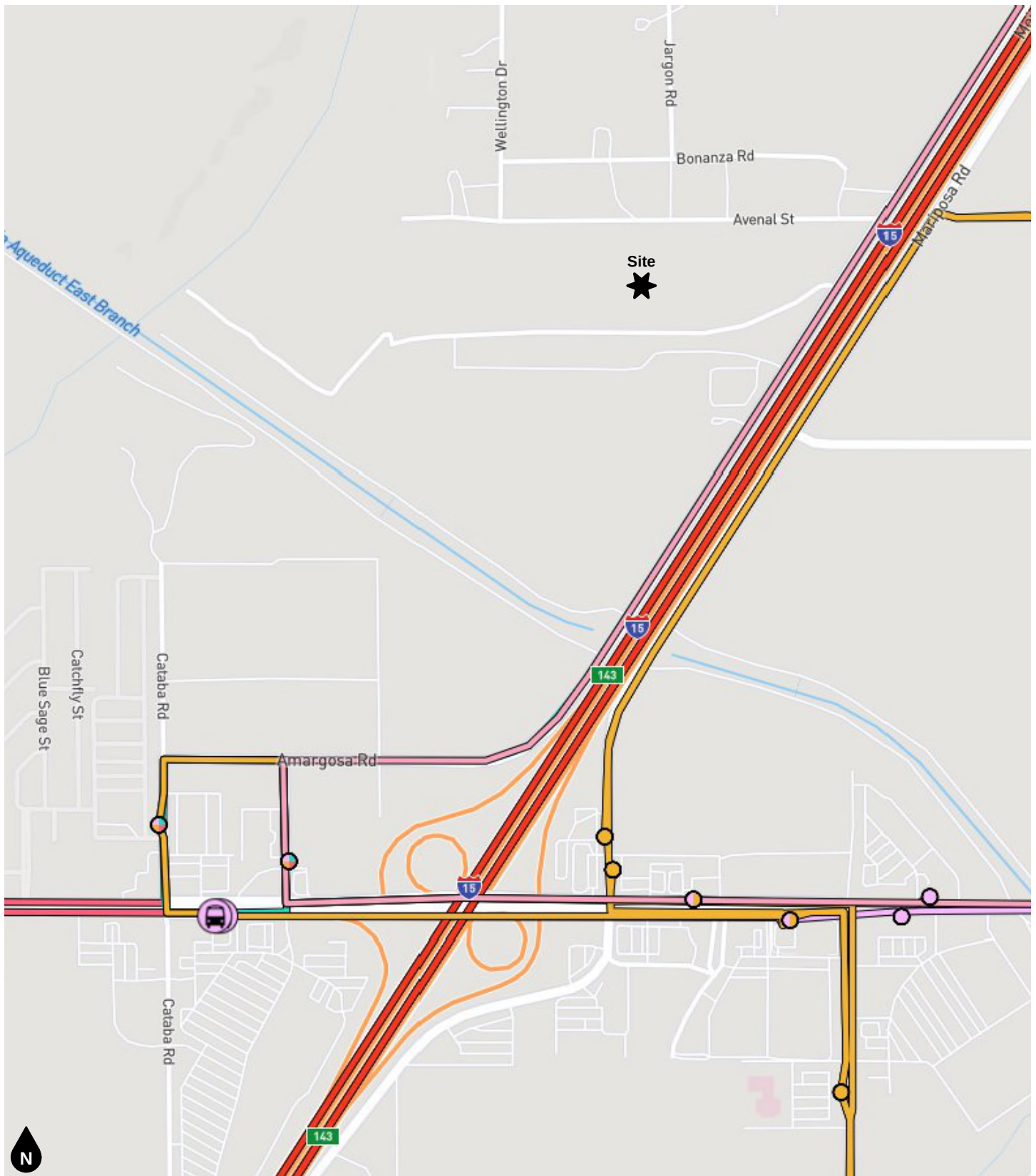
Figure 4
City of Hesperia General Plan Circulation Element

Source: City of Hesperia



Source: City of Hesperia

Figure 5
City of Hesperia General Plan Roadway Cross-Sections



114 Fort Irwin - Hesperia	20 Hesperia Super Target - Pinon Hills	21 Hesperia Super Target - Wrightwood
64 Hesperia Post Office - Super Target	15 Barstow - Victorville - San Bernardino	
68 Hesperia Post Office - Super Target		

Source: Victor Valley Transit

Figure 6
Victory Valley Transit Routes

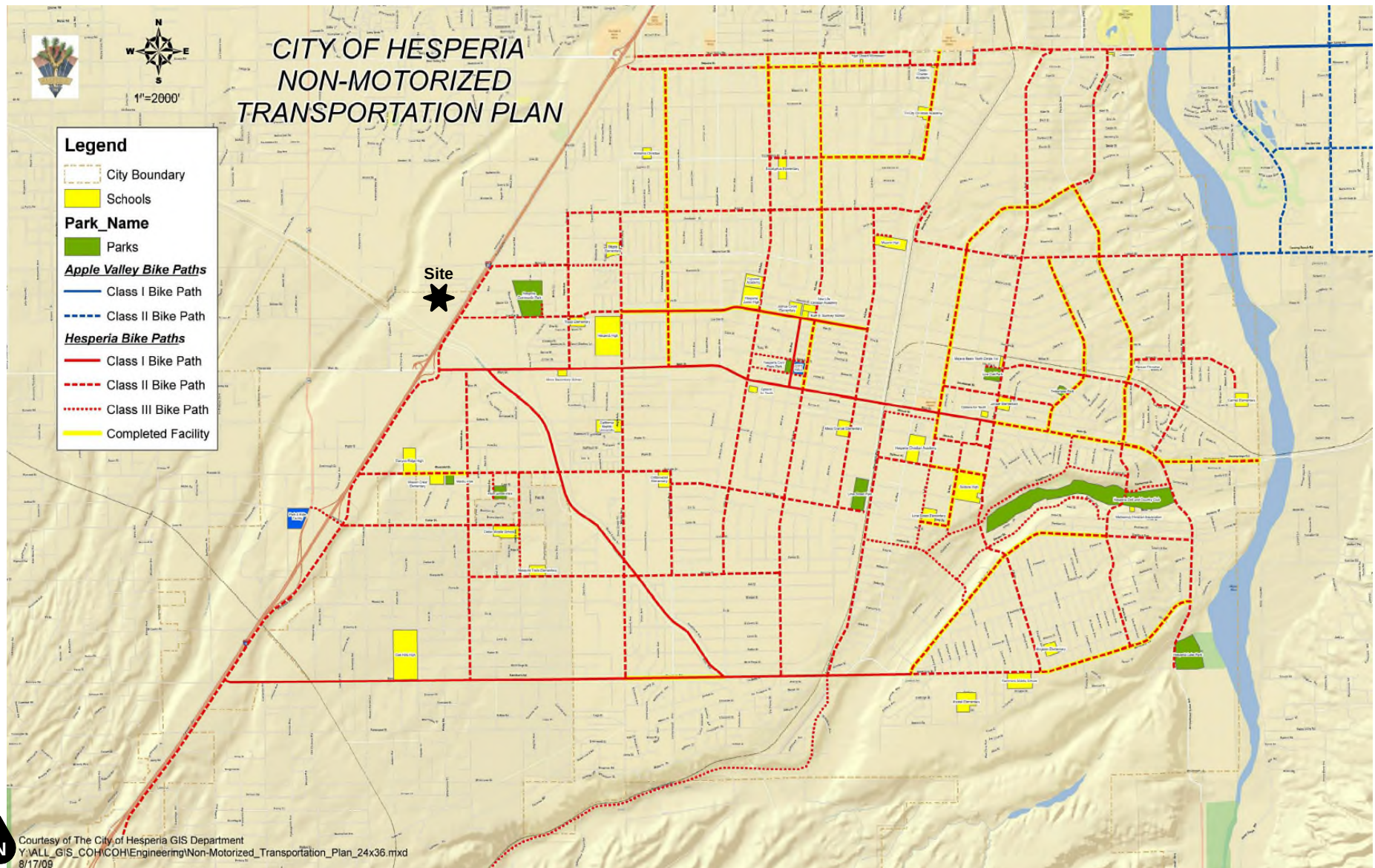
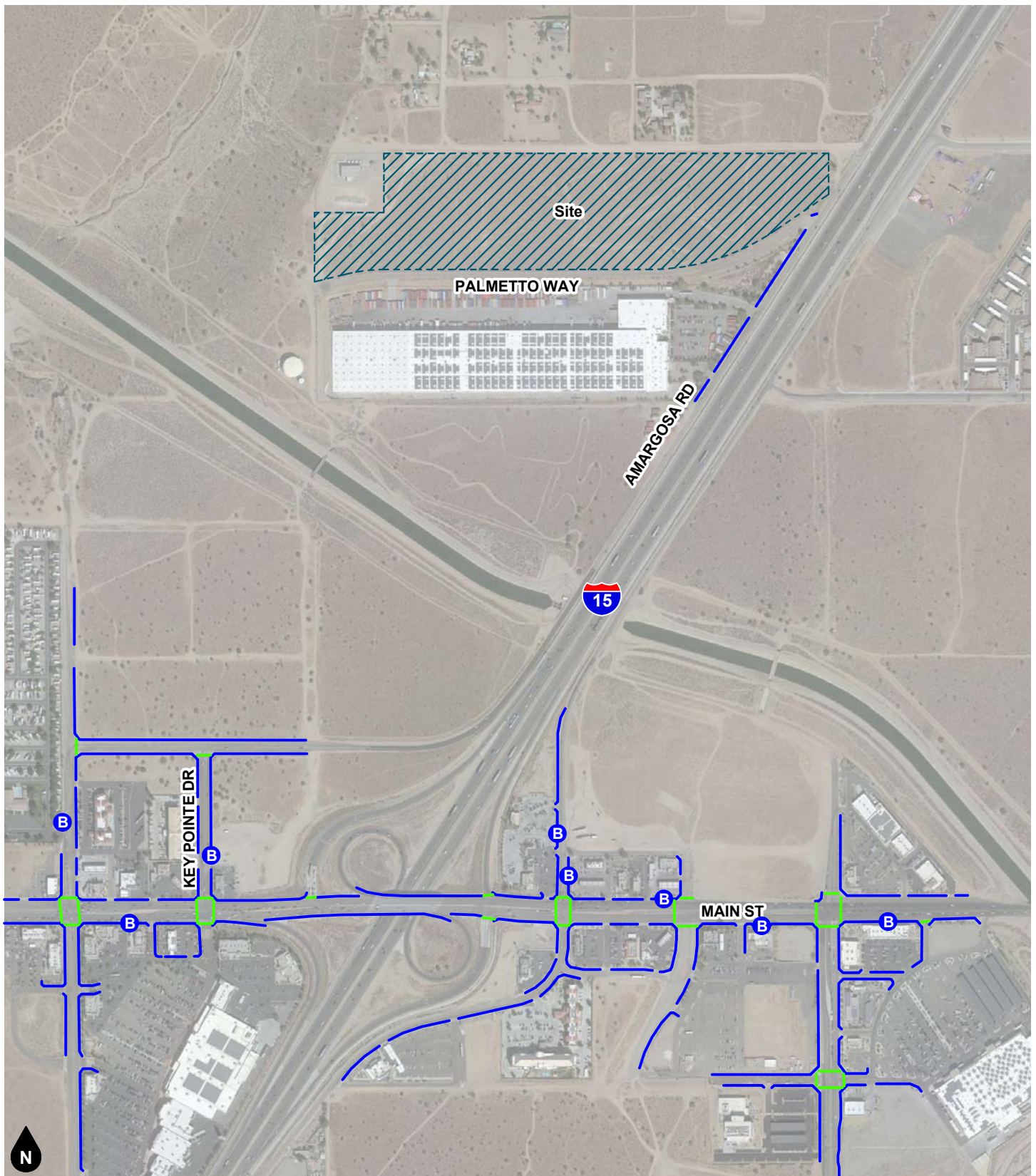


Figure 7
City of Hesperia General Plan Non-Motorized Transportation Plan Map

Source: City of Hesperia

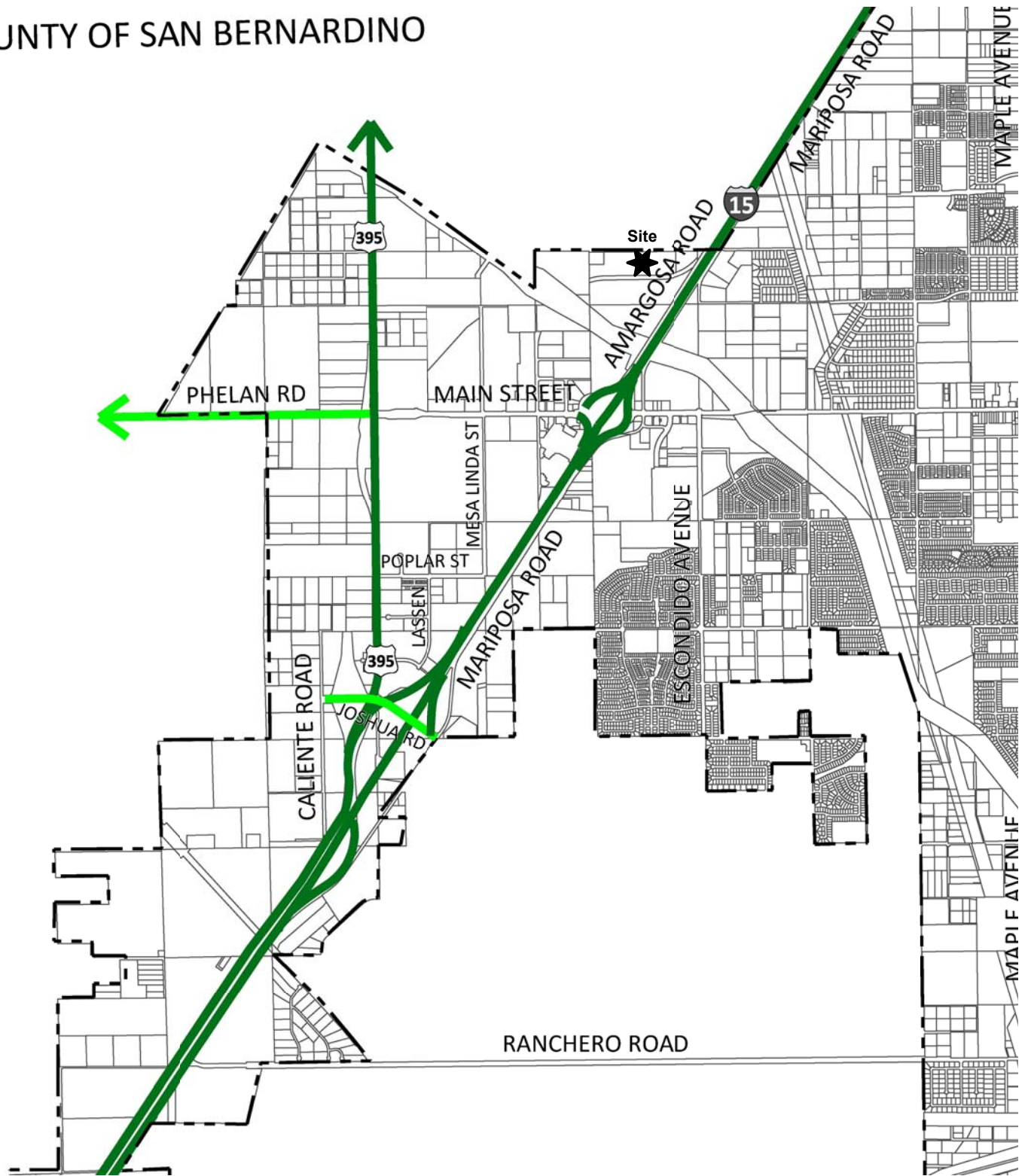


Legend

- Sidewalk
- Cross Walk
- B Bus Stop

Figure 8
Existing Pedestrian Facilities

COUNTY OF SAN BERNARDINO



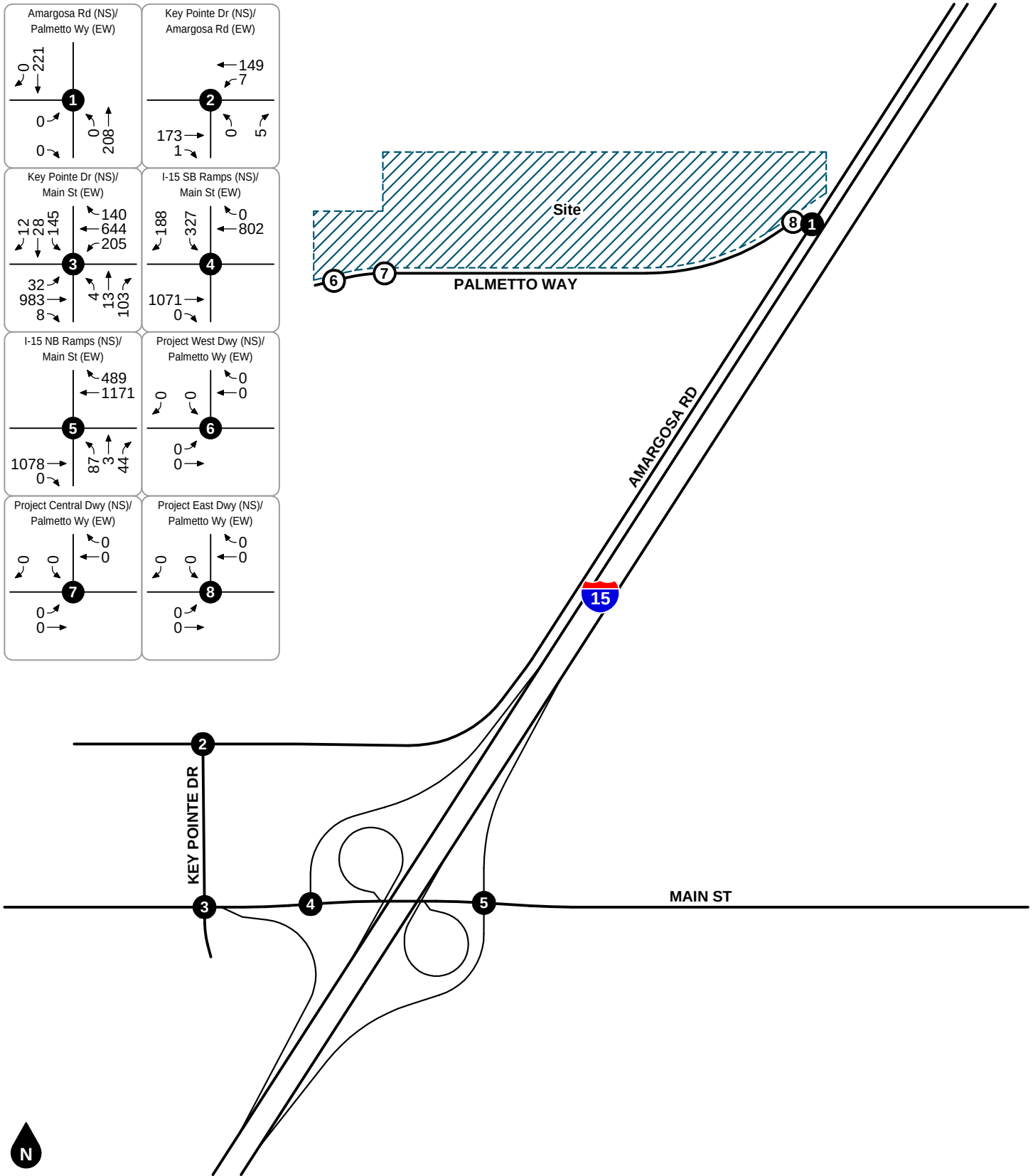
- TRUCK ROUTES
- OTHER JURISDICTION TRUCK ROUTES
- CALTRANS JURISDICTION TRUCK ROUTES
- JURISDICTIONAL BOUNDARY

Source: City of Hesperia



Figure 9
City of Hesperia Truck Route Map

Amargosa and Palmeto High-Cube Warehouse
Traffic Impact Analysis
19522



Legend

- # Study Intersection
- # Project Driveway

Figure 10
Existing AM Peak Hour Intersection Turning Movement Volumes

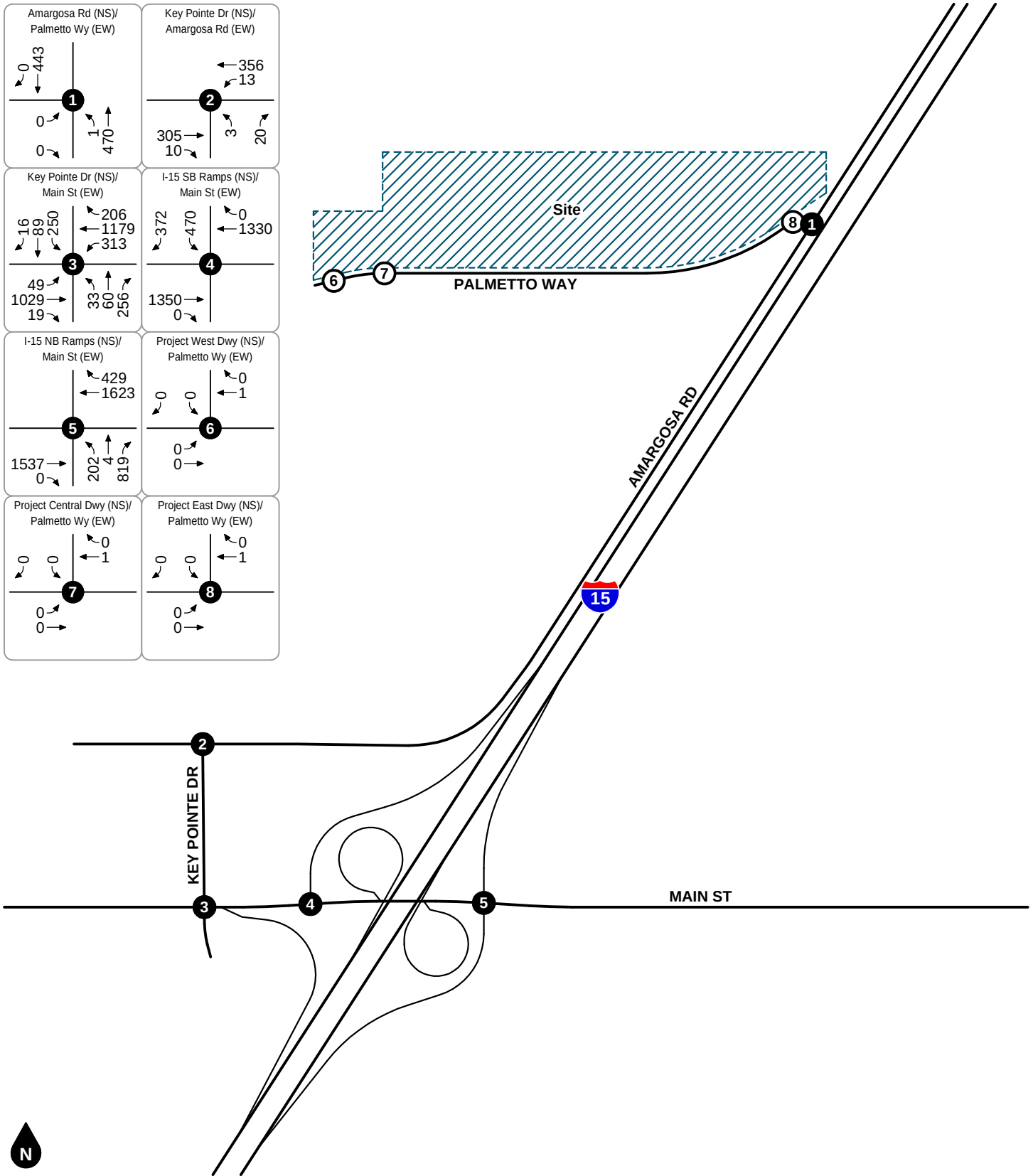


Figure 11
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT TRIP GENERATION

shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use description, trip generation rates for ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) were determined to adequately represent the proposed use and were selected for calculation of the project trip generation forecast. The number of trips generated is determined by multiplying the trip generation rates and directional distributions by the land use quantity.

As shown in Table 2, the proposed project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour.

Truck Trips

The project trip generation was also calculated in terms of Passenger Car Equivalent (PCE) trips. The percentage of truck trips was obtained from the ITE *Trip Generation Manual*. The truck mix by axle type was determined based on South Coast Air Quality Management District (SCAQMD) recommendations for high-cube warehousing facilities without cold-storage. Truck trips were converted to PCE trips based on the following factors: 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with four or more axles.

As also shown in Table 2, the proposed project is forecast to generate 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

Review of High-Cube Warehouse Rates

ITE provides the following land use description for Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort):

A high-cube warehouse (HCW) is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. The automation and logistics enable highly-efficient processing of goods through the HCW. High-cube fulfillment center warehouses include warehouses characterized by a significant storage function and direct distribution of ecommerce product to end users. These facilities typically handle smaller packages and quantities than other types of HCWs and often contain multiple mezzanine levels.

The ITE database further categorizes high-cube fulfillment center warehousing into sort or non-sort facilities. A sort facility is defined as a fulfillment center that ships out smaller items, requiring extensive manual sorting, whereas a non-sort facility ships out large box items that are processed primarily through automation. The trip generation rates for sorting facilities are substantially greater than rates for non-sort facilities; however, they are based on a limited sample size and may not necessarily represent typical operations. In addition, the limited data for sort facilities suggests a higher passenger car/light truck trip generation rate but lower heavy truck trip generation rate compared to non-sort facilities. Other types of high-cube warehouses include high-cube parcel hub and cold-storage warehouses, neither of which are currently contemplated uses for the proposed project.

Based on review of the available ITE data, ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) was determined to best represent a typical user for the type of building proposed, while still providing a more conservative daily trip estimate compared to a standard warehouse (ITE Land Use Code 150). To avoid grossly overestimating potential impacts and constructing unnecessary improvements, the project trip generation was calculated based on ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort). *Should a future potential tenant intend to occupy the building for use as a high-cube fulfillment center sorting facility, parcel hub, or cold-storage warehouse, preparation of a transportation demand management plan and/or further traffic analysis may be necessary to verify consistency with the trip estimates and findings of this study.*

Note that the proposed development will be limited to a non-sort warehouse fulfillment center. If a sorting facility is proposed, additional analysis will be required.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 12 to Figure 15 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns were developed using engineering judgment in consultation with City of Hesperia staff and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

Project AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 16 and Figure 17, respectively.

ALTERNATIVE LAND USE TRIP GENERATION

An alternative land use trip generation analysis has been conducted to determine the difference in trips generated between the proposed project as a High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) land use versus the project site at the same square footage as a Shopping Center land use.

Table 3 shows the alternative land use (commercial retail) trip generation based on regression equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use.

It should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 3 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative land use trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021) since Amargosa Road adjacent to the project site is a low volume roadway and pass-by trips would be minimal.

As shown in Table 3, the alternative land use is forecast to generate a total of approximately 18,915 daily trips, including 429 trips during the AM peak hour and 1,798 trips during the PM peak hour without a pass-by trips reduction.

TRIP GENERATION COMPARISON

Table 4 shows the difference in project trip generation between the proposed project and the alternative land use. The purpose of this analysis is to highlight the substantial decrease in trips generated between the proposed industrial land use in comparison to an equivalent size commercial retail development that could be permitted in accordance with the current land use designation.

As shown in Table 4, the proposed project is forecast to generate approximately 17,832 fewer daily trips compared to a shopping center land use of equivalent size, including 339 fewer trips during the AM peak hour and 1,717 fewer trips during the PM peak hour. Appendix D includes the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis* (Ganddini Group, Inc., November 28, 2022) which is a supplemental analysis that goes into greater detail regarding differences in turning movements at the study area intersections.

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.714 TSF

TRIP GENERATION RATES PER TSF ¹								
Vehicle Type	Source ²	AM Peak Hour			PM Peak Hour			Daily Rate
		In	Out	Rate	In	Out	Rate	
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED								
Vehicle Type	AM Peak Hour			PM Peak Hour			Daily	
	In	Out	Total	In	Out	Total		
Passenger Car	52	12	64	29	46	75	790	
Trucks								
2-Axle Trucks	1	1	2	0	0	0	19	
3-Axle Trucks	1	1	2	0	0	0	24	
4+ Axle Trucks	3	3	6	1	1	2	72	
Subtotal	5	5	10	1	1	2	115	
Total Vehicle Trips Generated	57	17	74	30	47	77	905	

PCE ³ TRIPS GENERATED								
Vehicle Type	PCE Factor ⁴	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		65	25	90	32	49	81	1,083

Notes:

(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 3
Alternative Land Use Trip Generation

Trip Generation Rates									
Land Use	Source ¹	Units ²	AM Peak Hour			PM Peak Hour			Daily Equation
			% In	% Out	Equation	% In	% Out	Equation	
Shopping Center (>150k)	ITE 820	TSF	62%	38%	$T = 0.59(X) + 133.55$	48%	52%	$LN(T) = 0.72LN(X) + 3.02$	$T = 26.11(X) + 5863.73$

Trips Generated									
Land Use	Quantity	Units ³	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Shopping Center (>150k)	499,850	TSF	266	163	429	863	935	1,798	18,915

Notes:

(1) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.

(2) TSF = Thousand Square Feet

Table 4
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Project ¹	65	25	90	32	49	81	1,083
Alternative Land Use ²	266	163	429	863	935	1,798	18,915
Difference	-201	-138	-339	-831	-886	-1,717	-17,832
	-76%	-85%	-79%	-96%	-95%	-95%	-94%

Notes:

(1) See Table 2.

(2) See Table 3.

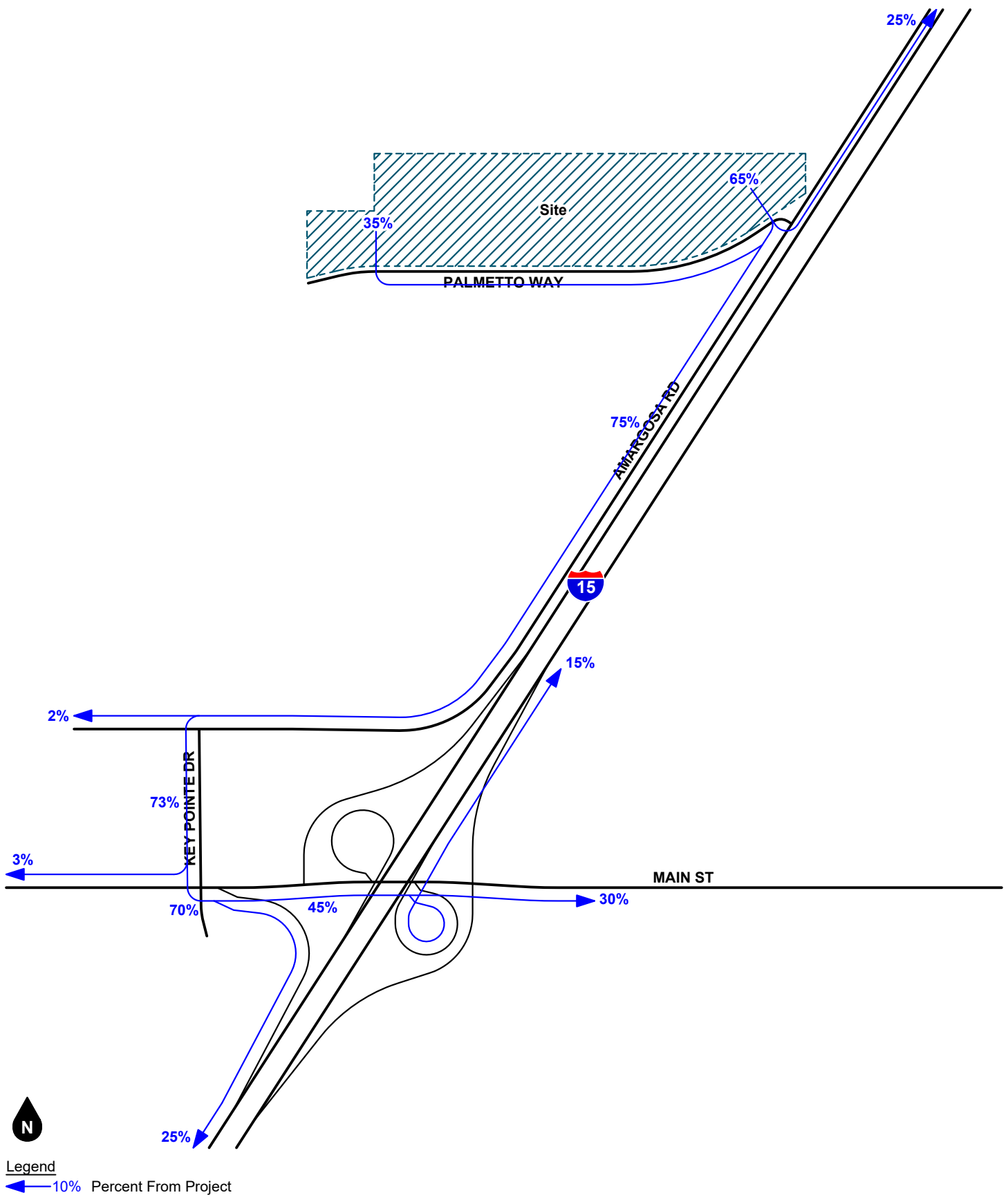


Figure 12
Project Outbound Trip Distribution - Cars

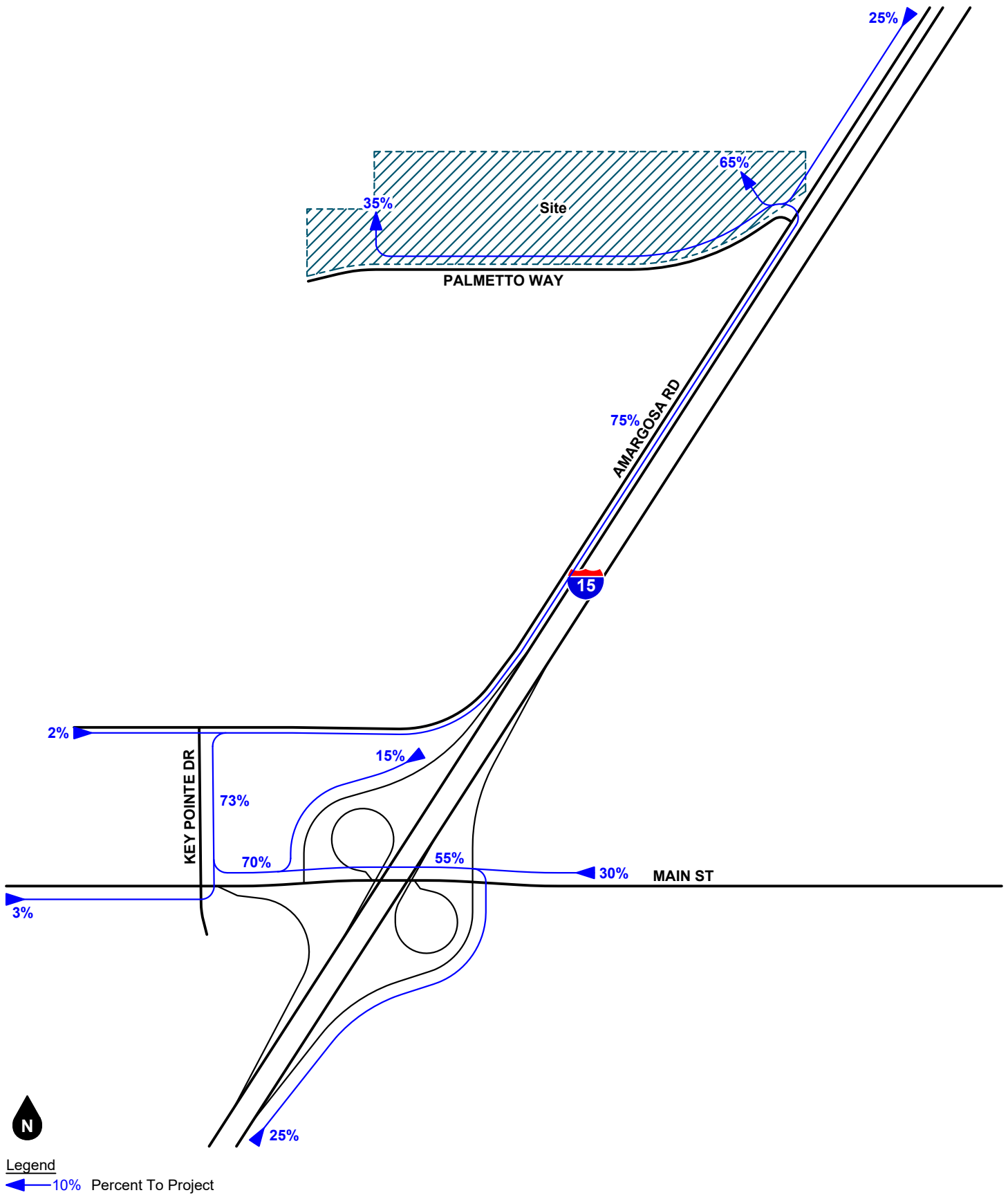


Figure 13
Project Inbound Trip Distribution - Cars

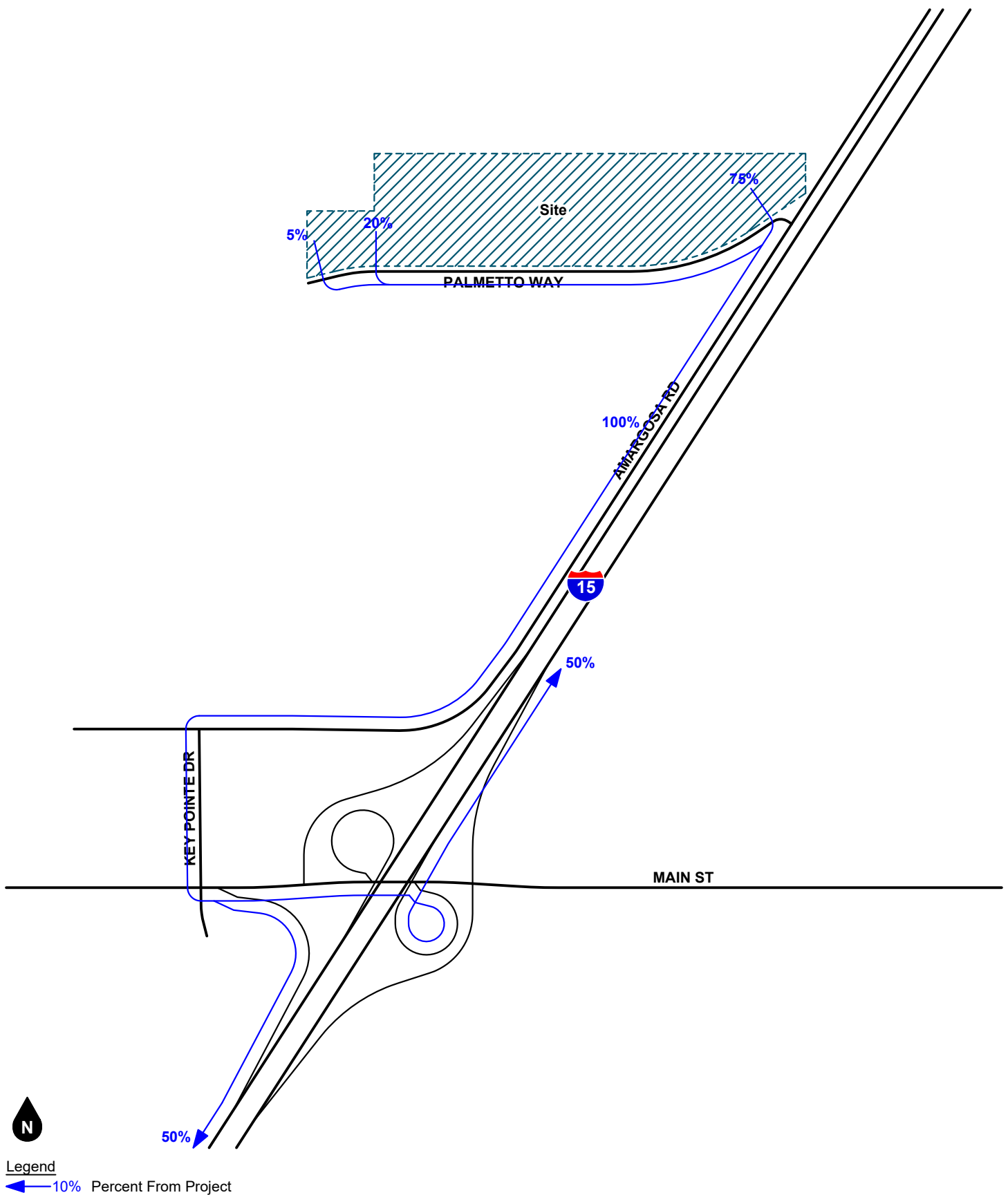


Figure 14
Project Outbound Trip Distribution - Trucks

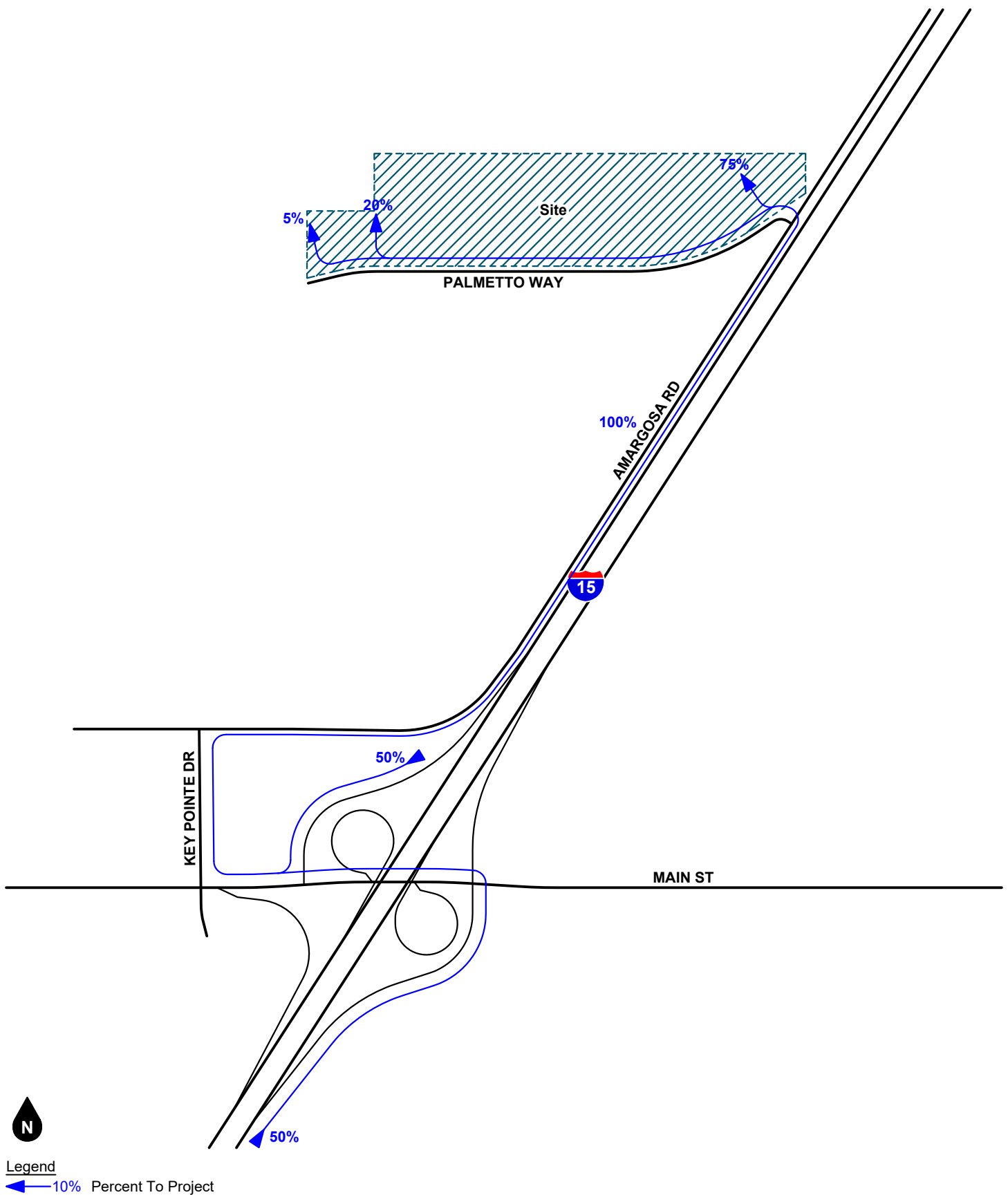


Figure 15
Project Inbound Trip Distribution - Trucks

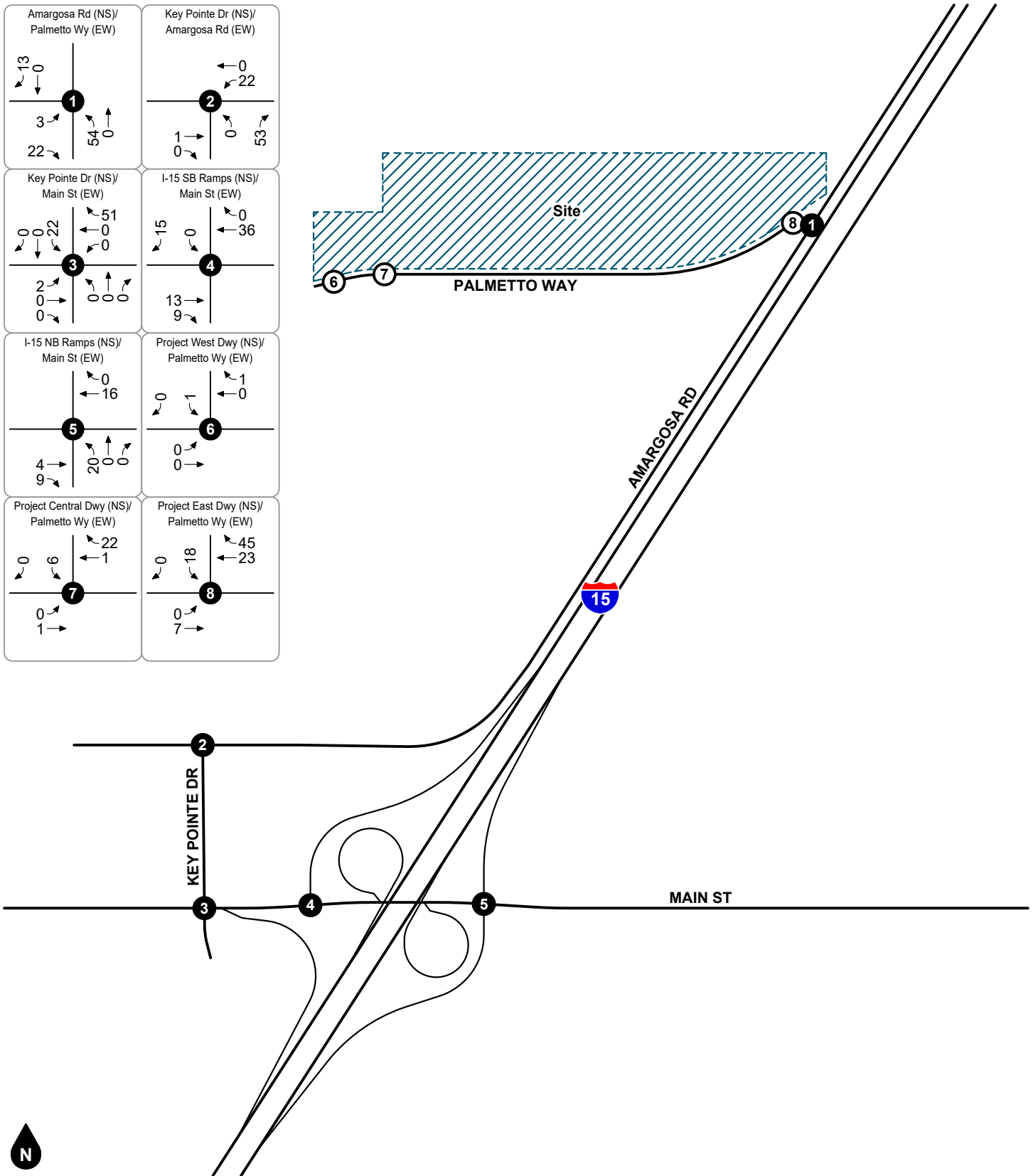
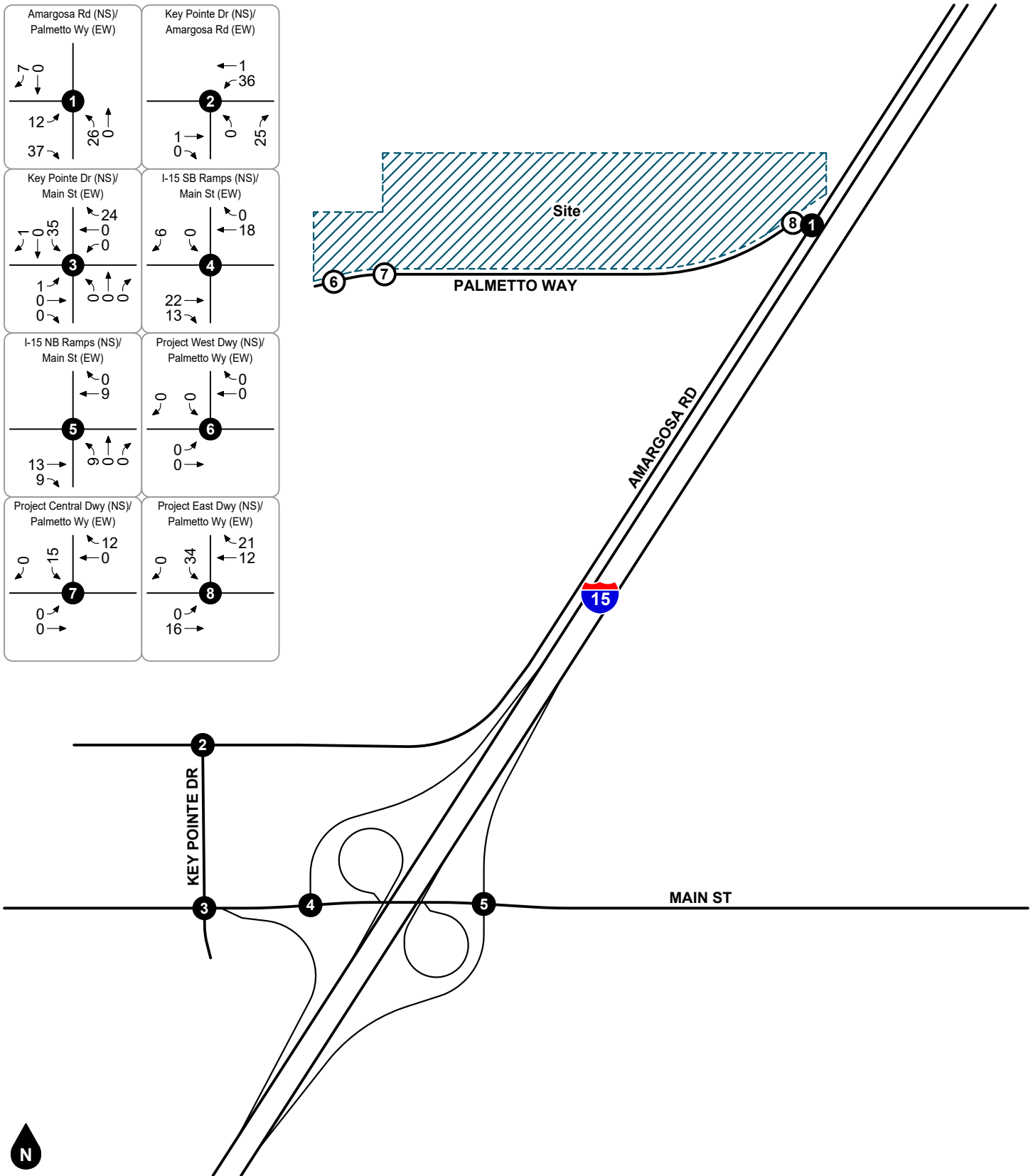


Figure 16
Project AM Peak Hour Intersection Turning Movement Volumes



- Legend**
- # Study Intersection
 - # Project Driveway

Figure 17
Project PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

CUMULATIVE TRIPS

Ambient Growth Rate

To account for ambient growth on roadways, existing 2022 volumes were increased by a growth rate of two percent (2%) per year over five years for Opening Year (2027) conditions; this equates to a total growth factor of approximately 1.104. The ambient growth rate was conservatively applied to all movements at the study intersections.

Other Development

To account for trips generated by future development, trips generated by pending or approved other development projects were added to the study area. Table 5 shows the other development project list for projects anticipated to contribute appreciable trips to the study area intersections and Figure 18 shows the other development location map.

Figure 19 and Figure 20 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments.

GENERAL PLAN BUILDOUT (2040) PROJECTIONS

General Plan Buildout (2040) forecasts have been determined using a growth increment approach with the San Bernardino Transportation Analysis Model (SBTAM) Year 2016 and Year 2040 travel demand model plots. This difference defines the incremental growth in forecast volumes over the 24-year period between 2016 and 2040. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between the current year traffic counts (2022) and year 2040. For this purpose, linear growth between the Year 2016 base condition and the forecast Year 2040 condition was assumed. Since the increment between the current year and Year 2040 is 18 years of the 24-year time frame, a factor of 0.75 (i.e., 18/24) was used.

To derive AM and PM peak hour intersection turning movement volumes, the roadway link growth forecasts were further refined using a spreadsheet program developed by the Federal Highway Administration and consistent with forecasting procedures outlined in the National Cooperative Highway Research Program Report 255. The spreadsheet program uses a linear programming algorithm to calculate future turning movements based on the relationship of existing intersection turning movements and forecast model growth. The forecast turning movements developed by the spreadsheet program were reviewed for reasonableness and adjusted as necessary to ensure no less than 10 percent traffic growth. The end results of the post-processing procedures are future traffic volumes suitable for analysis. Travel demand model plots are provided in Appendix F and post-processing worksheets are provided in Appendix G.

ANALYSIS SCENARIO VOLUME FORECASTS

Opening Year (2027) Without Project

To develop Opening Year (2027) Without Project volume forecasts, existing volumes were combined with ambient growth and trips generated by other developments. Opening Year (2027) Without Project AM and PM peak hour intersection turning movement volumes are shown Figure 21 and Figure 22.

Opening Year (2027) With Project

Opening Year (2027) With Project volume forecasts were developed by adding project generated trips to the Opening Year (2027) Without Project forecast. Opening Year (2027) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 23 and Figure 24.

General Plan Buildout (2040) Without Project

General Plan Buildout (2040) Without Project volume forecasts were developed based on the SBTAM travel demand model and post-processing procedures as described above. General Plan Buildout (2040) Without Project AM and PM peak hour intersection turning movement volumes are shown on Figure 25 and Figure 26.

General Plan Buildout (2040) With Project

General Plan Buildout (2040) With Project volumes were developed by adding project generated trips to the General Plan Buildout (2040) Without Project forecast volumes. General Plan Buildout (2040) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 27 and Figure 28.

Table 3 (1 of 2)
Other Development Trip Generation

Project Name	Land Use	Quantity	Trips Generated ²						
			AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
CUP23-00008	Fulfillment Center Warehouse	469.979 TSF							
	- Passenger Cars		49	12	61	28	43	71	743
	- Trucks (in PCE)		13	13	26	3	3	6	277
	Subtotal		62	25	87	31	46	77	1,020
Kiss Logistics Center (CUP22-00017)	Fulfillment Center Warehouse	655.468 TSF							
	- Passenger Cars		69	16	85	39	60	99	1,036
	- Trucks (in PCE)		16	16	32	10	10	20	382
	Subtotal		85	32	117	49	70	119	1,418
Hesperia Commerce Center II (includes CUPR24-0001)	Fulfillment Center Warehouse	3,901.194 TSF							
	- Passenger Cars		410	98	508	230	359	589	6,164
	- Trucks (in PCE)		97	97	194	50	50	100	2,282
	Subtotal		507	195	702	280	409	689	8,446
CUP23-00005/Phelan 20	Fulfillment Center Warehouse	419.700 TSF							
	- Passenger Cars		44	10	54	25	39	64	663
	- Trucks (in PCE)		13	13	26	3	3	6	244
	Subtotal		57	23	80	28	42	70	907
Pixior (CUPR25-00001)	Fulfillment Center Warehouse	440.000 TSF							
	- Passenger Cars		46	11	57	26	40	66	695
	- Trucks (in PCE)		13	13	26	3	3	6	257
	Subtotal		59	24	83	29	43	72	952
CUP24-00005	Commercial Retail	167.664 TSF	87	54	141	273	297	570	6,205
Newcastle (CUP22-00004)	Fulfillment Center Warehouse	400.000 TSF							
	- Passenger Cars		42	10	52	24	37	61	632
	- Trucks (in PCE)		10	10	20	3	3	6	235
	Subtotal		52	20	72	27	40	67	867
Poplar 18 Industrial Park (CUP21-00010)	Fulfillment Center Warehouse	414.700 TSF							
	- Passenger Cars		44	10	54	24	38	62	655
	- Trucks (in PCE)		10	10	20	3	3	6	244
	Subtotal		54	20	74	27	41	68	899
I-15 Industrial Park Project (CUP21-00004)	Fulfillment Center Warehouse	1,850.000 TSF							
	- Passenger Cars		194	46	240	109	170	279	2,923
	- Trucks (in PCE)		47	47	94	25	25	50	1,081
	Subtotal		241	93	334	134	195	329	4,004
Industrial Center (CUP22-00016/CUP24-0003)	Warehouse	74.924 TSF							
	- Passenger Cars		9	3	12	3	8	11	83
	- Trucks (in PCE)		3	0	3	3	3	6	113
	Subtotal		12	3	15	6	11	17	196

Table 3 (2 of 2)
Other Development Trip Generation

Project Name	Land Use	Quantity	Trips Generated ²						
			AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
SPR22-00017	Fulfillment Center Warehouse	142.634 TSF							
	- Passenger Cars		15	4	19	8	13	21	225
	- Trucks (in PCE)		3	3	6	0	0	0	85
	Subtotal		18	7	25	8	13	21	310
SPR24-00006	Fulfillment Center Warehouse	91.569 TSF							
	- Passenger Cars		10	2	12	5	8	13	145
	- Trucks (in PCE)		3	3	6	0	0	0	52
	Subtotal		13	5	18	5	8	13	197
Dara Industrial Project (CUP22-00003)	Fulfillment Center Warehouse	750.000 TSF							
	- Passenger Cars		79	19	98	44	69	113	1,185
	- Trucks (in PCE)		22	22	44	10	10	20	440
	Subtotal		101	41	142	54	79	133	1,625
CUP23-00007	Truck Parking	83 SP	7	1	8	1	6	7	59
SPR23-00024	Fulfillment Center Warehouse	150.000 TSF							
	- Passenger Cars		16	4	20	9	14	23	237
	- Trucks (in PCE)		3	3	6	0	0	0	89
	Subtotal		19	7	26	9	14	23	326
Hesperia Commerce Center (SPR23-00024)	Fulfillment Center Warehouse	3,500.000 TSF							
	- Passenger Cars		368	88	456	207	322	529	5,530
	- Trucks (in PCE)		88	88	176	47	47	94	2,048
	Subtotal		456	176	632	254	369	623	7,578
Total			1,830	726	2,556	1,215	1,683	2,898	35,009

Notes:

(1) TSF = Thousand Square Feet; SU = Storage Units

(2) Based on trip generation rates from:

ITE = Institute of Transportation Engineers Trip Generation Manual (11th Edition, 2021); ### = ITE Land Use Code.

SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

PCE = Passenger Car Equivalent

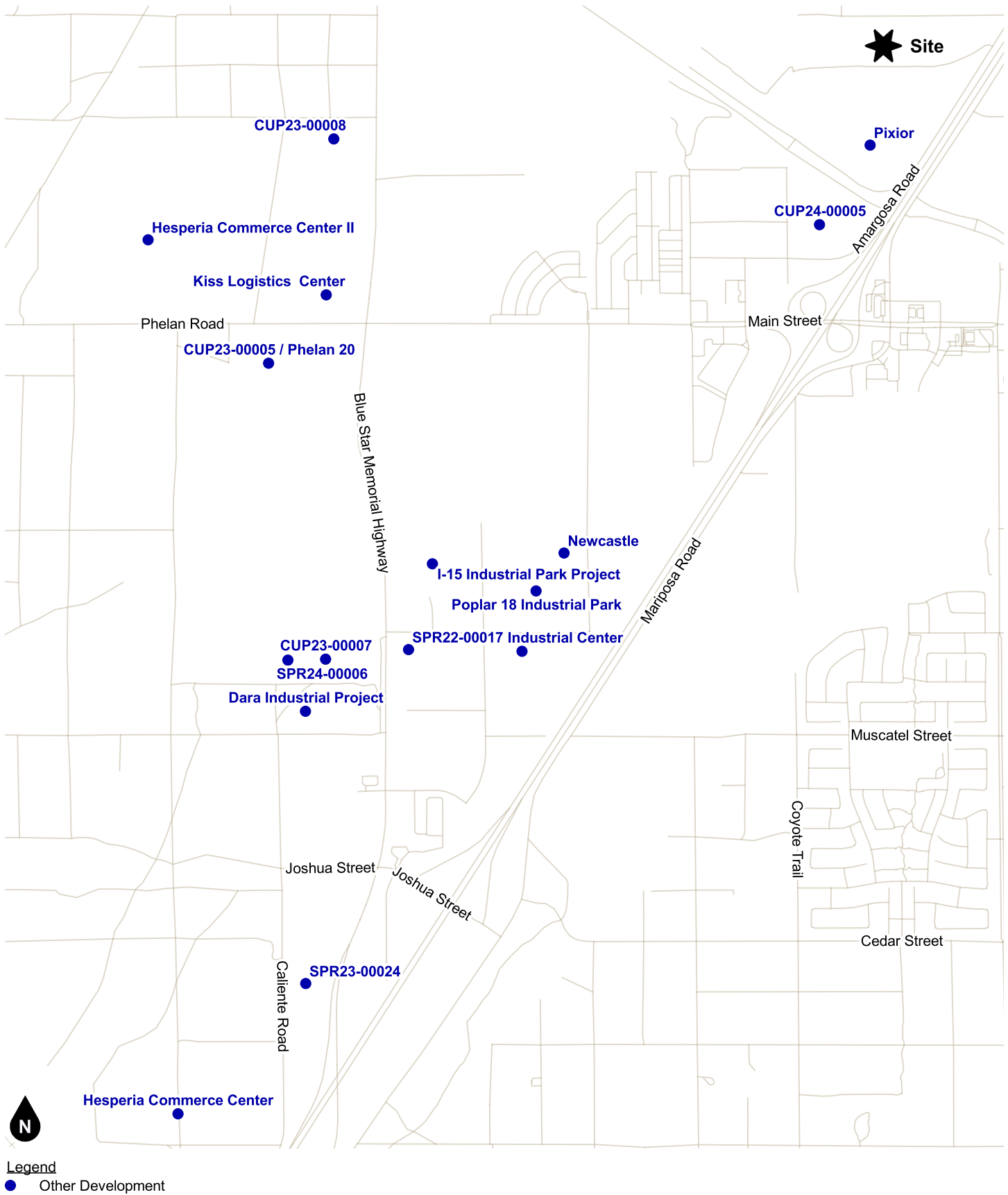


Figure 18
Other Development Location Map

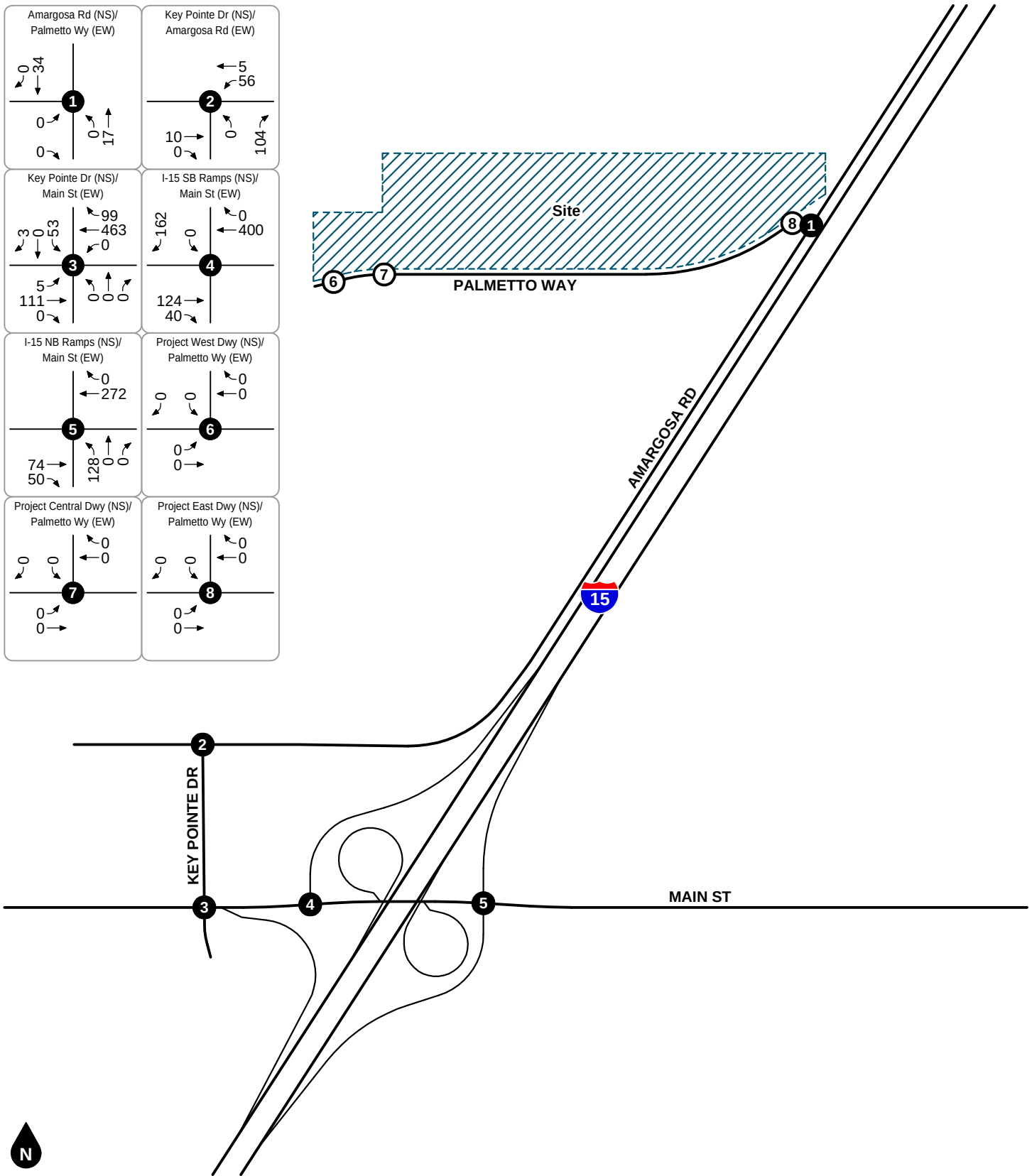


Figure 19
Other Development
AM Peak Hour Intersection Turning Movement Volumes

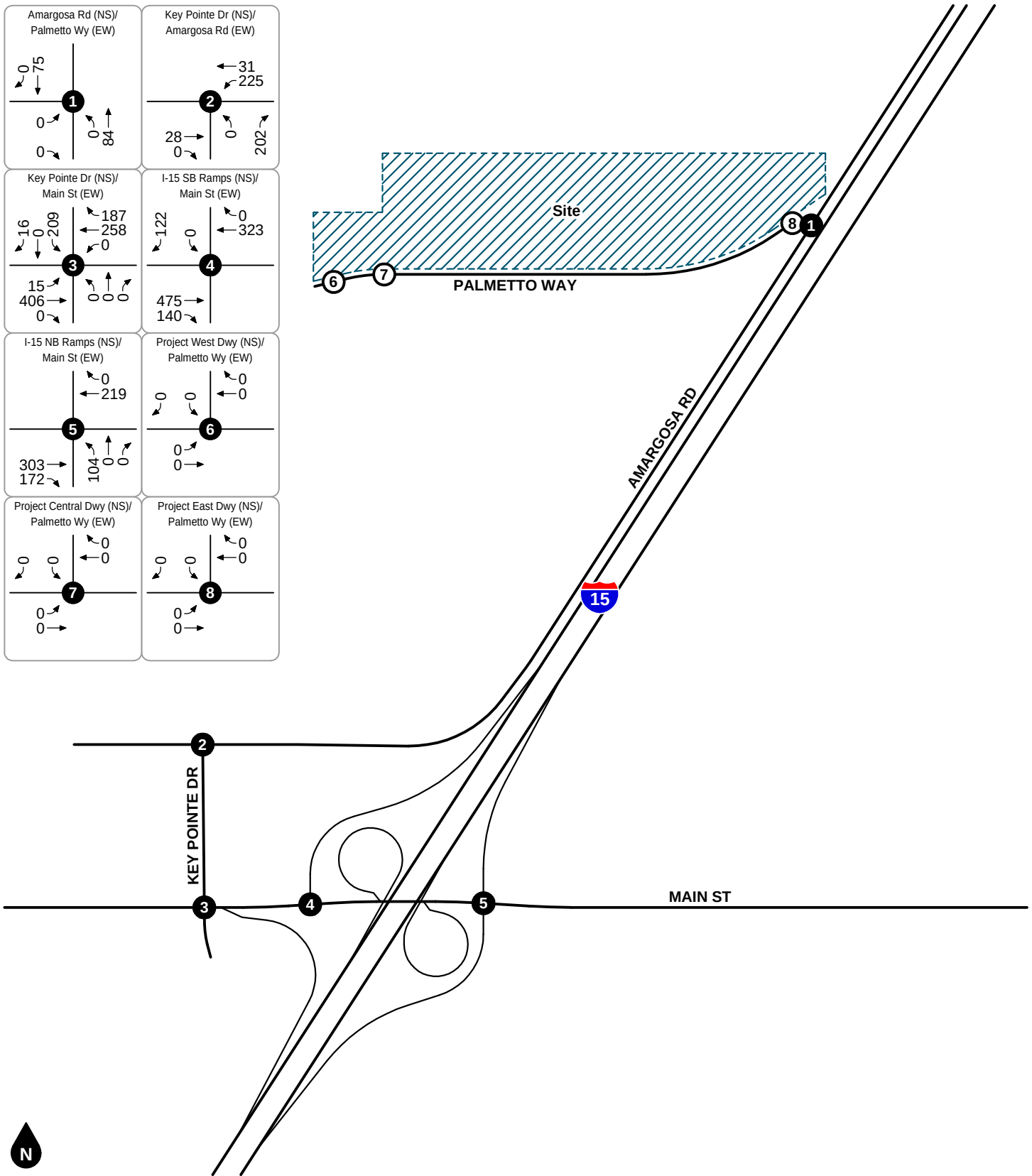


Figure 20
Other Development
PM Peak Hour Intersection Turning Movement Volumes

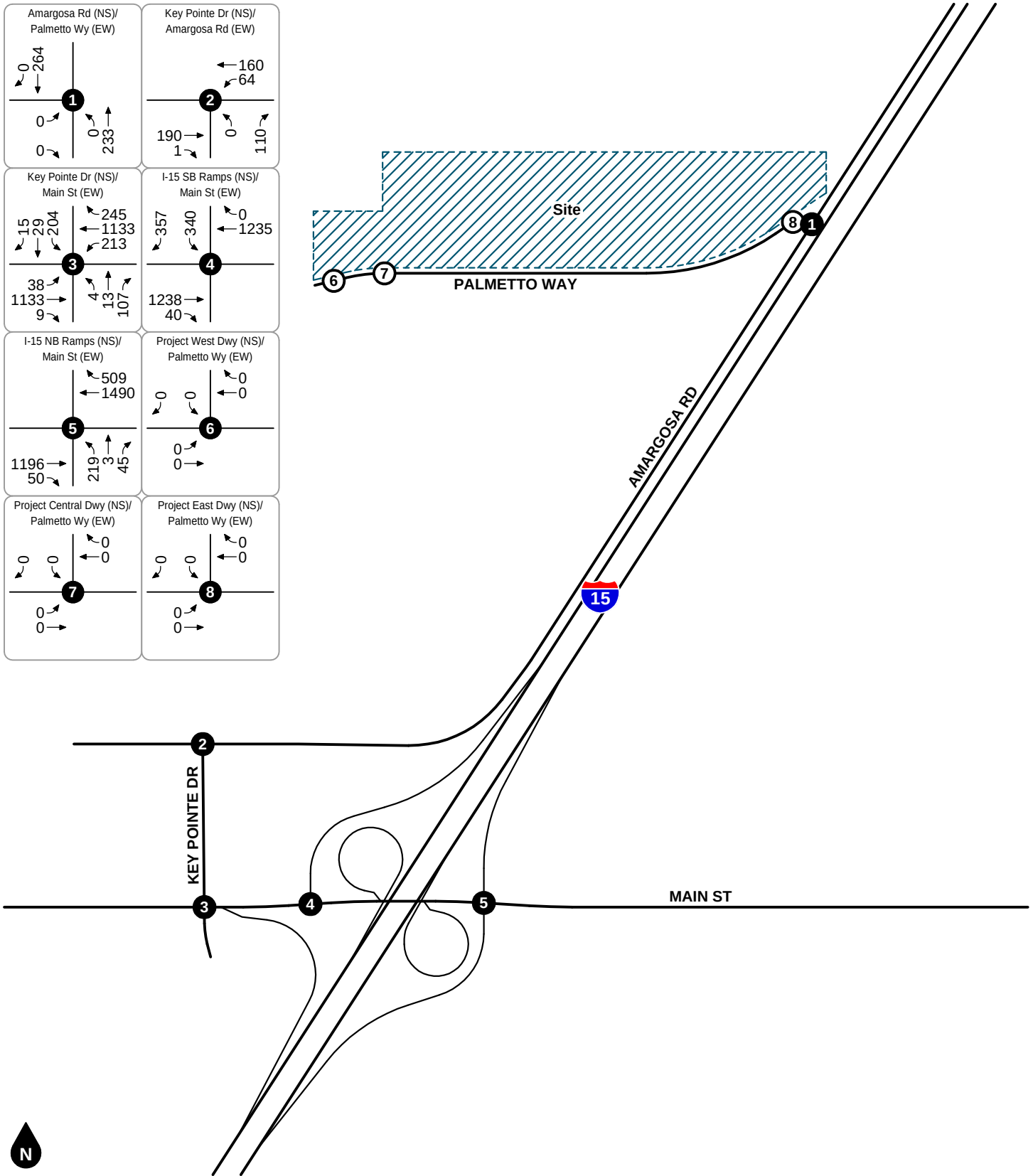


Figure 21
Opening Year (2027) Without Project
AM Peak Hour Intersection Turning Movement Volumes

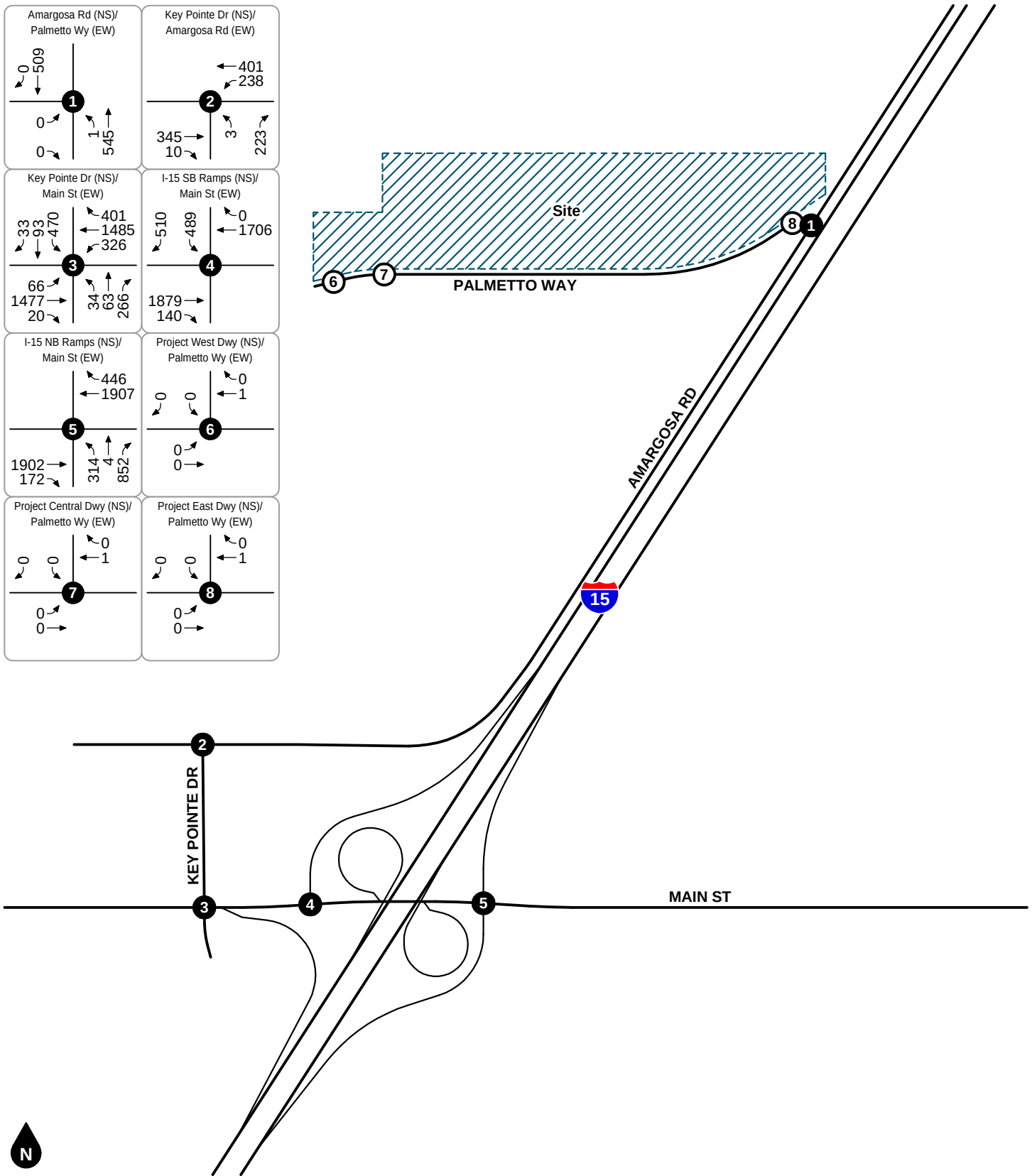


Figure 22
Opening Year (2027) Without Project
PM Peak Hour Intersection Turning Movement Volumes

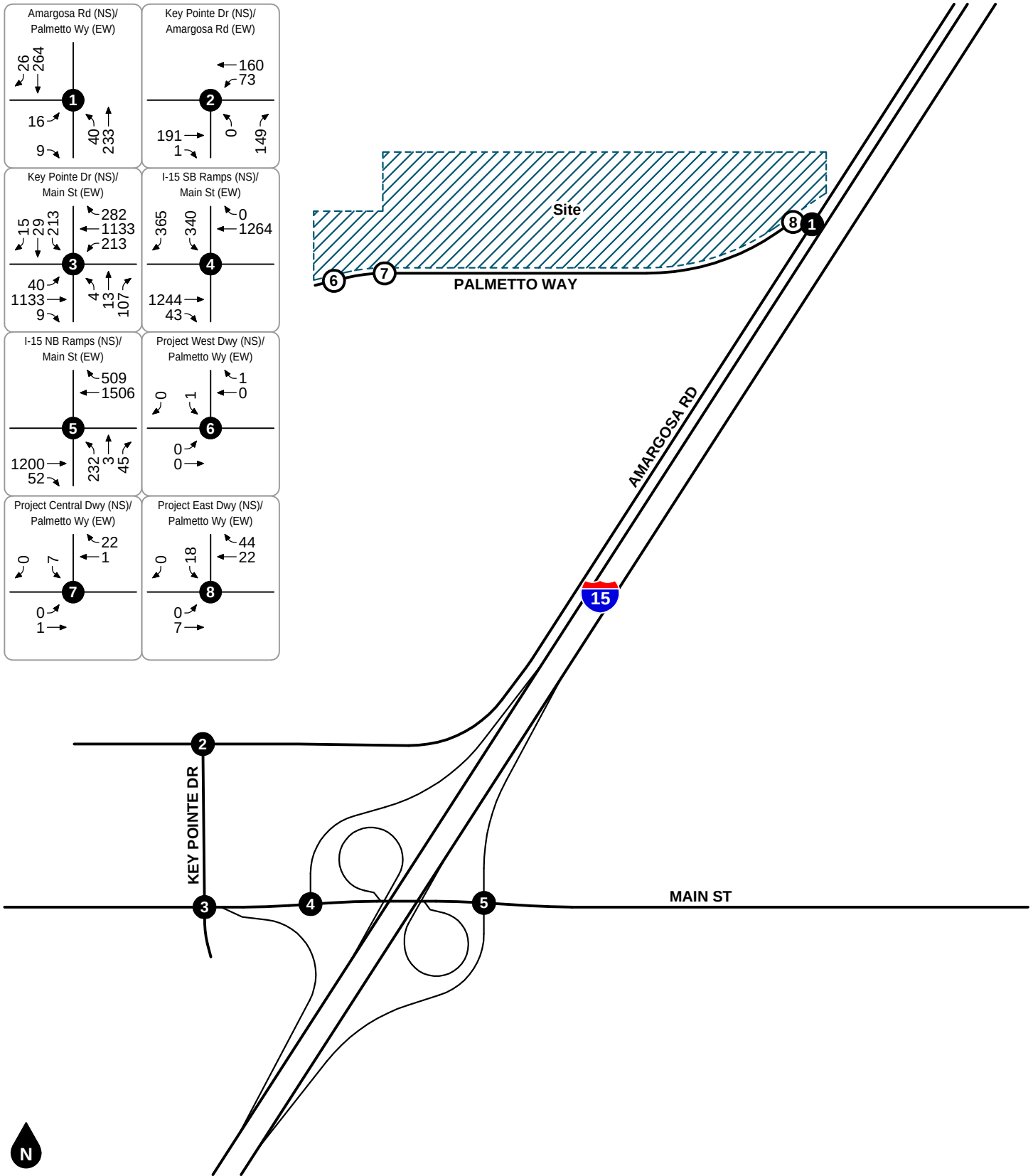


Figure 23
Opening Year (2027) With Project
AM Peak Hour Intersection Turning Movement Volumes

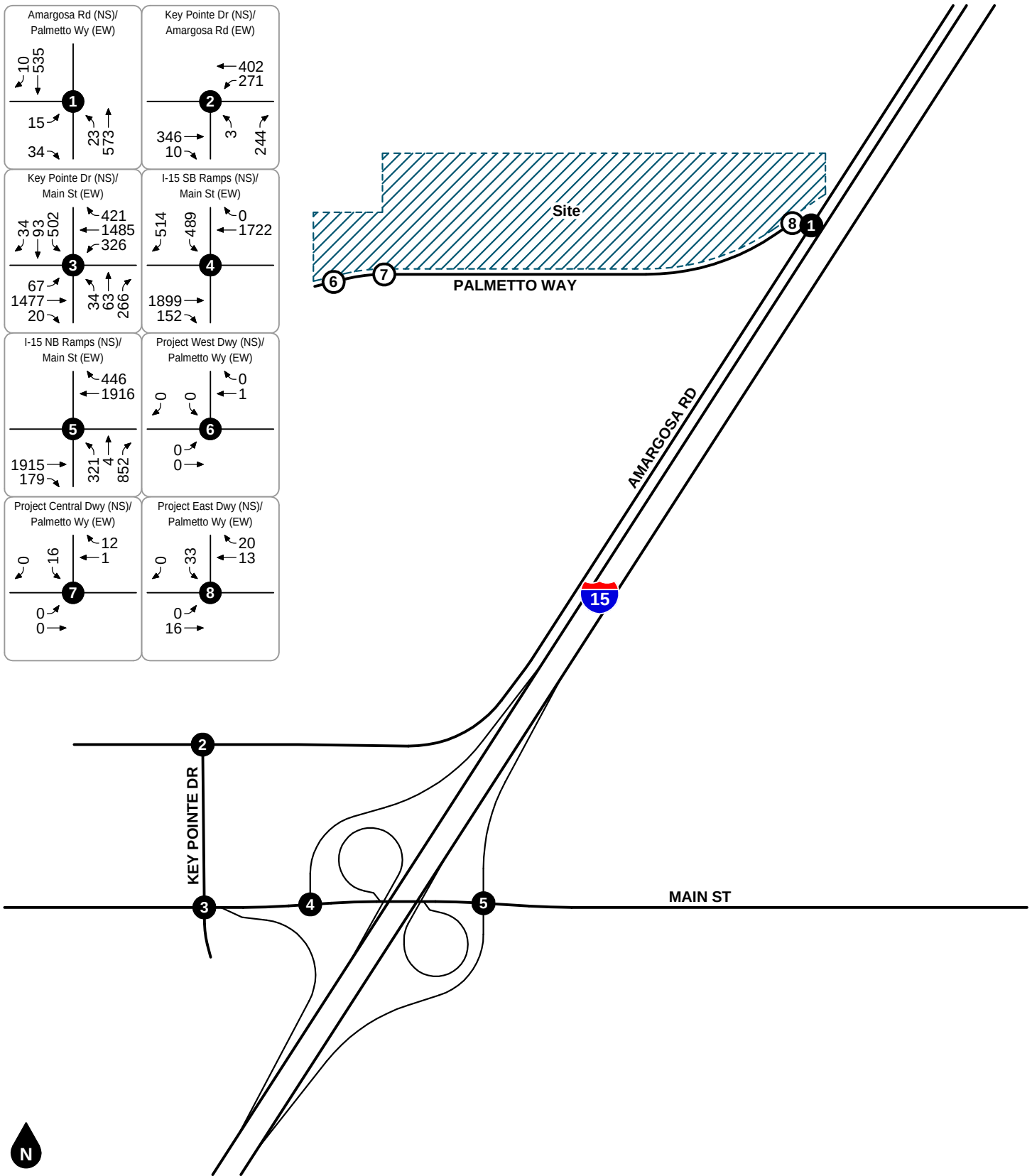


Figure 24
Opening Year (2027) With Project
PM Peak Hour Intersection Turning Movement Volumes

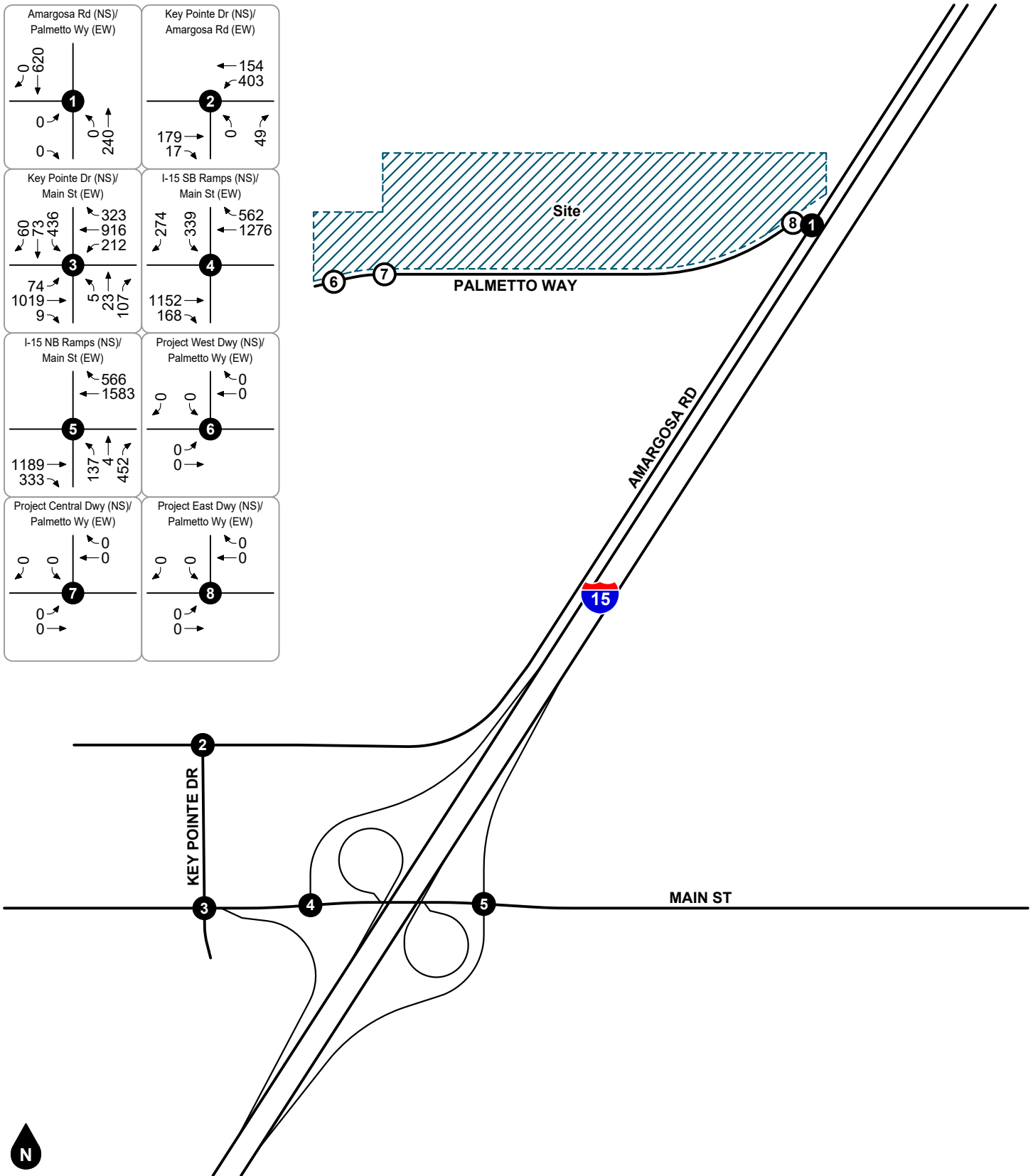


Figure 25
General Plan Buildout (2040) Without Project
AM Peak Hour Intersection Turning Movement Volumes

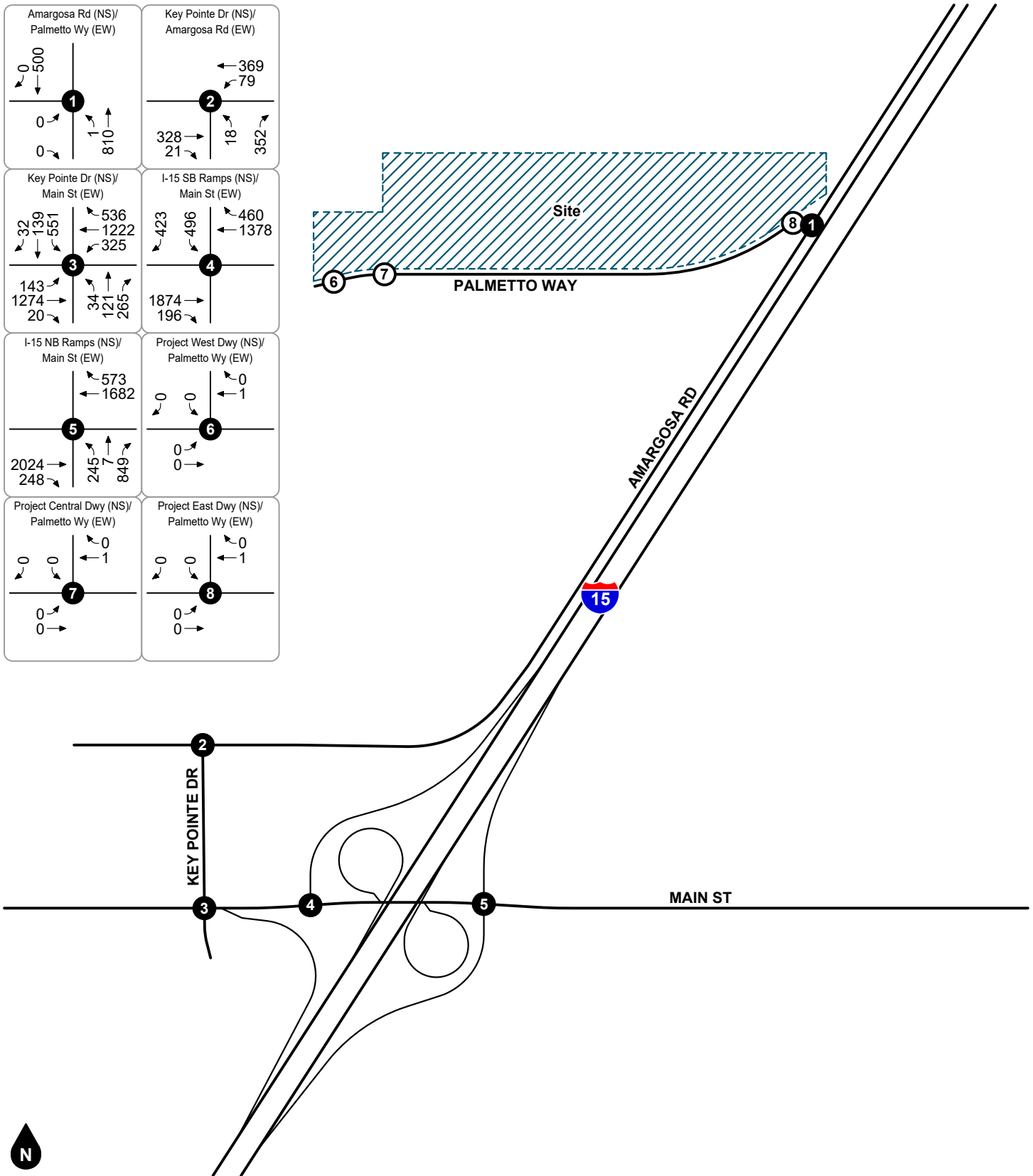
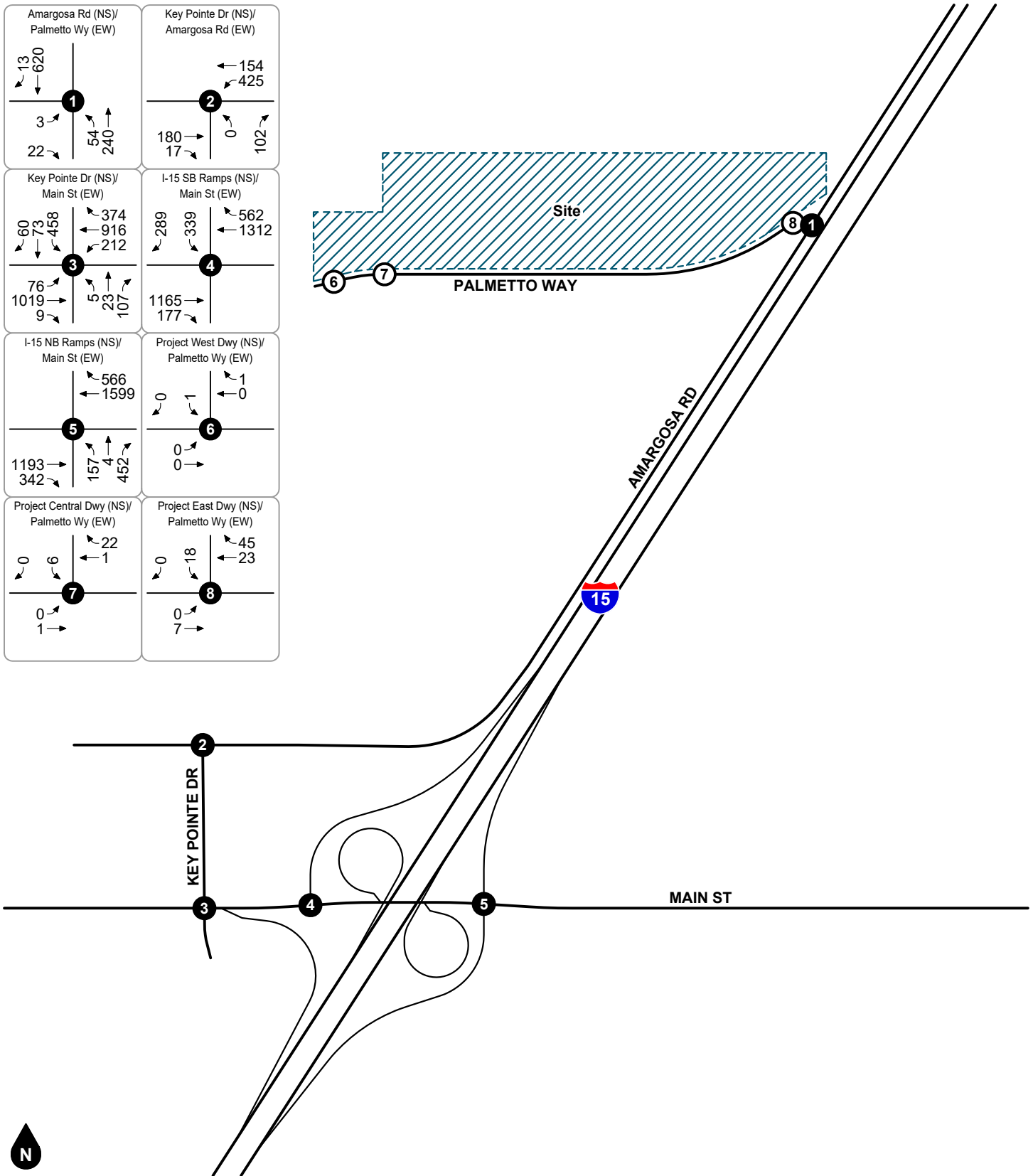


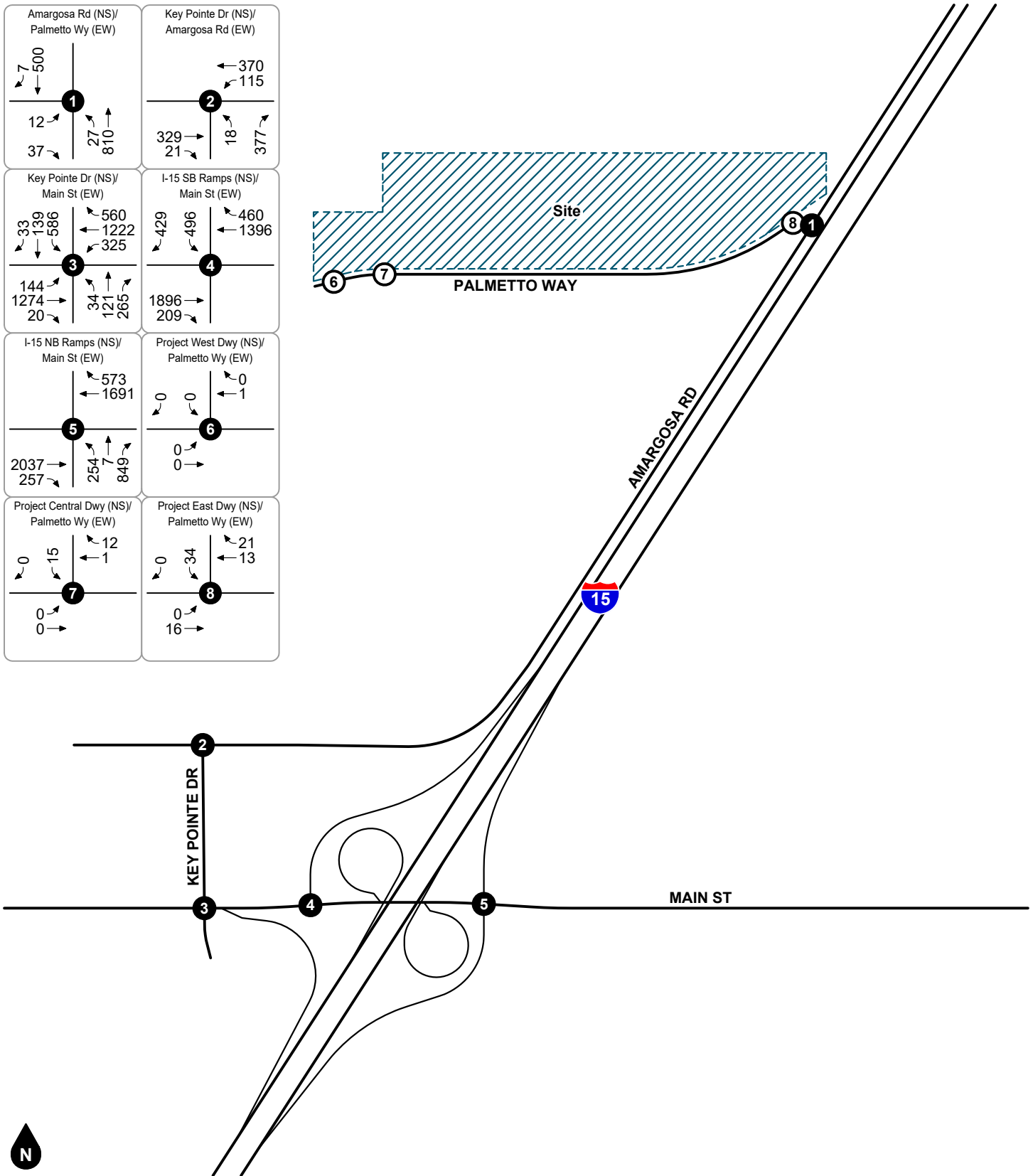
Figure 26
General Plan Buildout (2040) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

- # Study Intersection
- # Project Driveway

Figure 27
General Plan Buildout (2040) With Project
AM Peak Hour Intersection Turning Movement Volumes



- Legend**
- # Study Intersection
 - # Project Driveway

Figure 28
General Plan Buildout (2040) With Project
PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix D.

OPENING YEAR (2027) WITHOUT PROJECT

The intersection Levels of Service for Opening Year (2027) Without Project conditions are shown in Table 6. As shown in Table 6, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

OPENING YEAR (2027) WITH PROJECT

The intersection Levels of Service for Opening Year (2027) With Project conditions are shown in Table 7. As shown in Table 7, the study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
 - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT

The intersection Levels of Service for General Plan Buildout (2040) Without Project conditions are shown in Table 8. As shown in Table 8, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

GENERAL PLAN BUILDOUT (2040) WITH PROJECT

The intersection Levels of Service for General Plan Buildout (2040) With Project conditions are shown in Table 9. As shown in Table 9, the study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
 - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

A conceptual striping exhibit for the improvement of a second southbound left turn lane at the intersection of Key Pointe Drive at Main Street (Int. #3) is shown on Figure 29.

The traffic signal would require modification from north-south permitted phasing to protected phasing.

PROJECT FAIR SHARE CONTRIBUTION

Table 10 shows the project fair share contributions and summary of improvements recommended for cumulative conditions. The project fair share contribution is based on the proportion of project peak hour intersection turning movement volumes contributed to the improvement location relative to the total new peak hour intersection turning movement volumes. The intersection fair share cost calculations are typically based on the higher of the AM or PM peak hour traffic volumes. The fair share calculations are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

Note that the existing turning movement volumes are based on the year 2022 traffic counts to most accurately reflect the change in volumes from when existing traffic counts were taken compared to forecasted General Plan Buildout forecast volumes.

Table 6
Opening Year (2027) Without Project Intersection Levels of Service

Study Intersection	Traffic Control ¹	AM Peak Hour		PM Peak Hour	
		Delay ²	LOS ³	Delay ²	LOS ³
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	11.0	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	17.1	B	86.1	F
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	10.4	B	15.6	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	6.0	A	14.4	B

Notes:

- (1) CSS = Cross Street Stop; TS = Traffic Signal
- (2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
- (3) LOS = Level of Service

Table 7
Opening Year (2027) With Project Intersection Levels of Service

Study Intersection	Traffic Control ¹	AM Peak Hour		PM Peak Hour	
		Delay ²	LOS ³	Delay ²	LOS ³
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	12.1	B	16.3	C
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.5	A	11.2	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	17.5	B	111.0	F
- With Improvements	TS	14.6	B	31.8	C
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	10.6	B	15.9	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	6.3	A	14.5	B
6. Project West Driveway (NS) at Palmetto Way (EW)	CSS	8.5	A	0.0	A
7. Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8. Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

Notes:

- (1) CSS = Cross Street Stop; TS = Traffic Signal
- (2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
- (3) LOS = Level of Service

Table 8
General Plan Buildout (2040) Without Project Intersection Levels of Service

Study Intersection	Traffic Control ¹	AM Peak Hour		PM Peak Hour	
		Delay ²	LOS ³	Delay ²	LOS ³
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.0	A	12.5	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	24.9	C	160.2	F
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	8.8	A	12.2	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	8.1	A	13.5	B

Notes:

- (1) CSS = Cross Street Stop; TS = Traffic Signal
- (2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
- (3) LOS = Level of Service

Table 9
General Plan Buildout (2040) With Project Intersection Levels of Service

Study Intersection	Traffic Control ¹	AM Peak Hour		PM Peak Hour	
		Delay ²	LOS ³	Delay ²	LOS ³
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	13.6	B	17.1	C
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	12.9	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	25.6	C	189.5	F
- With Improvements	TS	26.4	C	50.1	D
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	9.0	A	12.3	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	8.2	A	13.6	B
6. Project West Driveway (NS) at Palmetto Way (EW)	CSS	8.5	A	0.0	A
7. Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8. Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

Notes:

- (1) CSS = Cross Street Stop; TS = Traffic Signal
- (2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
- (3) LOS = Level of Service

Table 10
Project Fair Share Contribution

Study Intersection	Peak Hour	Intersection Turning Movement Volumes				
		Existing	General Plan Buildout With Project	Project Trips	Total New Trips	Project Share of Total New Trips
3. Key Pointe Drive (NS) at Main Street (EW)	AM	2,083	3,332	75	1,249	6.0%
	PM	3,298	4,723	61	1,425	4.3%

Study Intersection	Improvement
3. Key Pointe Drive (NS) at Main Street (EW)	Construct a second SB left turn lane.



Note: Proof of concept only; not for construction. Final plans shall conform with all applicable CA MUTCD requirements.

Figure 29
Conceptual Striping Plan

7. SITE ACCESS AND CIRCULATION

This section includes a description of project improvements necessary to provide site access and an evaluation of site access and circulation.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project as project design features to provide project site access:

- Construct Avenal Street at its ultimate half-section width from the project west terminus to Amargosa Way including landscaping and parkway improvements in conjunction with development, as necessary.
- Construct Palmetto Way at its ultimate half-section width from the project west terminus to Amargosa Way including landscaping and parkway improvements in conjunction with development, as necessary.
- Construct Project West Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:
 - Southbound: one shared left/right turn lane
 - Eastbound: one shared left/through lane
 - Westbound: one shared through/right turn lane
- Construct Project Central Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:
 - Southbound: one shared left/right turn lane
 - Eastbound: one shared left/through lane
 - Westbound: one shared through/right turn lane
- Construct Project East Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:
 - Southbound: one shared left/right turn lane
 - Eastbound: one shared left/through lane
 - Westbound: one shared through/right turn lane

This analysis also assumes the project shall comply with the following conditions as part of the City of Hesperia standard development review process:

- A construction work site traffic control plan shall comply with State standards set forth in the California Manual of Uniform Traffic Control Devices and shall be submitted to the City for review and approval prior to the issuance of a grading permit or start of construction. The plan shall identify any roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction related trips shall be restricted to off-peak hours to the extent possible.
- All on-site and off-site roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project shall be constructed in accordance with applicable State/Federal engineering standards and to the satisfaction of the City of Hesperia.

- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Hesperia.
- Adequate off-street parking shall be provided to the satisfaction of City of Hesperia.
- Adequate emergency vehicle access shall be provided to the satisfaction of the Hesperia Fire Department.
- The final grading, landscaping, and street improvement plans shall demonstrate that sight distance requirements are met in accordance with applicable City of Hesperia/California Department of Transportation sight distance standards.

8. VEHICLES MILES TRAVELED

BACKGROUND

California Senate Bill 743 (SB 743) directed the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) [“OPR Technical Advisory”] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City of Hesperia has established VMT analysis guidelines at this time; therefore, the project-related VMT impact has been assessed based on guidance from the City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020).

SCREENING ASSESSMENT

The City of Hesperia TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory, or projects that are local serving and thus, by definition, reduce VMT by decreasing the number or distance of trips.

The City of Hesperia TIA Guidelines provide the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City Traffic Engineer, with input from the Metropolitan Planning Organization); or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the project is located within a TPA. Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a TPA; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

The SBCTA VMT Screening Tool was used assess low VMT area screening for the project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if a project is in a low VMT-generating area, the appropriate baseline TAZ VMT is compared to the current County of San Bernardino VMT threshold of 39.0 VMT per service population. Additionally, as noted above, the City directs the analyst to identify if the project is consistent with the existing land use within that TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing the data from the travel demand model

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 47.4 using OD VMT per service population in the baseline year (2025) compared to the County of San Bernardino VMT threshold of 39.0 OD VMT per service population (+21.69% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria. Attachment A shows the SBCTA VMT Screening Tool results.

The screenshot displays the SBCTA VMT Screening Tool interface. On the left, the 'Input' tab is active, showing four numbered steps for configuration. Step 1 involves selecting a map area (a red rectangle is shown on the map). Step 2 involves selecting the VMT Metric, with 'OD VMT Per Service Population' chosen. Step 3 involves selecting the Baseline Year, with '2025' chosen. Step 4 involves selecting the Threshold, with 'Below County Baseline (0%)' chosen. A 'Run' button is at the bottom. On the right, a map shows the project location. A pop-up window titled '(1 of 2)' displays the following data:

Traffic Analysis Zone (TAZ)	53908201
Community Region	Hesperia
Inside a Transit Priority Area (TPA)	No
TAZ VMT	47.4
Jurisdiction VMT	39
% Difference	21.69%
VMT Metric	OD VMT Per Service Population
Threshold	39
Community Regions have different thresholds	0
Zoom to	

Attachment A: SBCTA VMT Screening Tool – OD VMT Per Service Population

City guidelines state that “In some cases, it may be appropriate to extract the Project-generated VMT using the production-attraction trip matrix. This may be appropriate when a project is entirely composed of retail or office uses, and there is a need to isolate the home-based work (HBW) VMT for purposes of isolating commute VMT. The City should evaluate the appropriate methodology based on the project land use types and context.”

The San Bernardino County *Transportation Impact Study Guidelines* (July 2019) states under Section 4.1 (CEQA Assessment – VMT Analysis: Analysis Methodology), “Consistent with OPR guidelines, the following specific components will be utilized to complete a VMT impact assessment:

- Employment Projects – VMT/Employee for only the home-based work trip purpose (attractions) and would apply to office, industrial, governmental, and institutional projects.”

The project consists solely of industrial land use. Therefore, all trips to/from the project site are work-based trips and it is appropriate to analyze the project site using the production-attraction trip matrix for VMT per worker, since VMT per worker measures the average (mean) distance a worker drives to work by vehicle in a given period of time.

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 29.5 using PA VMT per worker in the baseline year (2025) compared to the County of San Bernardino VMT average of 23.0 PA VMT per worker (+28.51% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria. Attachment B shows the SBCTA VMT Screening Tool results.

The screenshot displays the SBCTA VMT Screening Tool interface. On the left, a sidebar contains a search bar and a list of steps: #1. Select the parcel(s), #2. Select the VMT Metric, #3. Select the Baseline Year, and #4. Select the Threshold. The main map area shows a green field with orange rectangular overlays representing the project parcels. A results panel on the right displays the following information:

(1 of 2)	
OBJECTID	1
Assessor Parcel Number (APN)	040507253
Traffic Analysis Zone (TAZ)	53908201
Community Region	Hesperia
Inside a Transit Priority Area (TPA)	No
TAZ VMT	29.5
Jurisdiction VMT	23
% Difference	28.51%
VMT Metric	PA VMT Per Worker
Threshold	23
Community	0

At the bottom of the results panel, there is a 'Zoom to' button. The map area also shows various streets including Mojave St, Bonanza Rd, and Palmetto Way.

Attachment B: SBCTA VMT Screening Tool – PA VMT Per Worker

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

The following additional uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local serving K-12 schools
- Local parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local serving assembly uses (places of worship, community organizations)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects generating less than 110 daily vehicle trips. This generally corresponds to the following “typical” development potentials:
 - 11 single family housing units
 - 16 multi-family, condominiums, or townhouse housing units
 - 10,000 square feet of office
 - 15,000 square feet of light industrial
 - 63,000 square feet of warehousing
 - 79,000 square feet of high-cube transload and short-term storage warehouse

Based on review of project type screening, the proposed project is greater than 63,000 square feet of warehousing; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Screening Assessment Finding

The proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

9. CONCLUSIONS

This section summarizes the findings from the previous sections of this report.

PROJECT TRIP GENERATION

The proposed project is forecast to generate 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

LEVELS OF SERVICE

The study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
 - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
 - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

VMT ANALYSIS

Based on review of the SBCTA VMT Screening Tool, the proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Trip Generation Comparison Analysis
Appendix E Level of Service Worksheets
Appendix F SBTAM Model Plots
Appendix G Post-Processing Worksheets

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT



MEMORANDUM OF UNDERSTANDING

TO: CITY OF HESPERIA

FROM: Bryan Crawford, Senior Transportation Planner | GANDDINI GROUP, INC.

DATE: May 23, 2022

SUBJECT: Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis Scoping

INTRODUCTION

The purpose of this traffic study scoping document is to outline the proposed traffic analysis parameters and assumptions for review/concurrence by City of Hesperia staff.

PROJECT DESCRIPTION

Figure 1 shows the project location map. The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as exhibited in Figure 2.

The site plan is shown in Appendix A. The 30.52-acre project site is proposed to include a 545,000 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024.

The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 505,665 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE Trip Generation Manual and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD). As shown in Table 1, the proposed project is forecast to generate approximately 1,179 daily PCE trips, including 97 PCE trips during the AM peak hour and 102 PCE trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 6 illustrate the forecast outbound and inbound directional distribution patterns of project-generated truck trips and passenger car trips.

STUDY AREA

Based on the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020) guidelines, intersections identified for analysis typically include signalized intersections at which a project is forecast to contribute 50 or more trips during the AM or PM peak hours. The study area is proposed to consist of the following eight (8) study intersections, even if the project may not contribute 50 or more trips during either peak hour.

Study Intersections (Figure 1)

1. Amargosa Road (NS) at Palmetto Way (EW)
2. Key Pointe Drive (NS) at Amargosa Road (EW)
3. Key Pointe Drive (NS) at Main Street (EW)
4. I-15 SB Offramp (NS) at Main Street (EW)
5. I-15 NB Ramps (NS) at Main Street (EW)
6. Project West Driveway (NS) at Palmetto Way (EW)
7. Project Central Driveway (NS) at Palmetto Way (EW)
8. Project East Driveway (NS) at Palmetto Way (EW)

TRAFFIC COUNTS

Intersection turning movement counts will be used at the study intersections during the AM peak period (7:00 AM – 9:00 AM) and PM peak period (4:00 PM – 6:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday).

ANALYSIS SCENARIOS

The traffic study shall evaluate the following analysis scenarios for weekday AM and PM peak hour conditions:

- Existing [2022]
- Opening Year Without Project [2024]
- Opening Year With Project [2024]
- General Plan Buildout Without Project [2040]
- General Plan Buildout With Project [2040]

ANALYSIS METHODOLOGY

To assess the performance of an intersection, the [Manager] uses the intersection delay method based on procedures contained in the Highway Capacity Manual (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service (LOS). Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

Intersection Level of Service analysis shall be performed using the Vistro software.

PERFORMANCE STANDARDS

City of Hesperia

The City of Hesperia has established LOS D as the minimum acceptable Level of Service along all City maintained roads (including intersections).

OPERATIONAL THRESHOLDS

City of Hesperia

For study intersections within the City of Hesperia jurisdiction, a traffic impact occurs if:

- The addition of peak hour project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,
- The addition of peak hour project generated trips worsens the delay at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

If a project is forecast to cause an operational traffic impact, feasible improvements that will reduce the impact to an acceptable LOS are identified. Improvements can be in many forms, including the addition of lanes, traffic control modification, or demand management measures.

FORECASTING METHODOLOGY

Ambient Growth Rate

To account for area-wide ambient growth, the Opening Year 2024 will include a 2% annual growth for 2 years (total growth factor = 1.04) over the 2022 base volumes. City staff shall confirm that this growth rate is applicable and refine as necessary.

Other Cumulative Projects

A list of pending and approved cumulative development projects will be obtained from Cities of Hesperia and Victorville staff. This list will be narrowed down to include projects within a 1.5 mile radius of the project site.

Trip forecasts for other development projects within the project study area will be determined based on the Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition, 2021 and will be added to existing roadway volumes for the applicable analysis scenarios.

General Plan Buildout Volume Forecasts

Year 2040 traffic volume forecasts will be obtained from the current San Bernardino Transportation Analysis Model (SBTAM). Ganddini Group shall perform post-processing procedures to calculate the growth increment between the base year model volumes and the Year 2040 forecast model volumes to be added to current year traffic volumes. Weekday AM and PM peak hour link volumes shall be converted to turning movement volumes using the “b-turns” program. Year 2040 With Project conditions will be determined by manually adding project trips to the baseline Year 2040 forecast.

VEHICLES MILES TRAVELED (VMT) ANALYSIS

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Agencies are required to apply the updated CEQA guidelines for VMT analysis and implementation was required State-wide by July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) [“Technical Advisory”] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City of Hesperia has established VMT analysis guidelines at this time; therefore, the project-related VMT impact has been assessed based on guidance from the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020).

VTM Screening Assessment

The project VMT impact has been assessed in accordance with guidance from the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020).

The City of Hesperia TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory, or projects that are local serving and thus, by definition, reduce VMT by decreasing the number or distance of trips.

The City of Hesperia TIA Guidelines provide the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City Traffic Engineer, with input from the Metropolitan Planning Organization); or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the project is located within a TPA. Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a TPA; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

The SBCTA VMT Screening Tool was used assess low VMT area screening for the project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if a project is in a low VMT-generating area, the appropriate baseline TAZ VMT is compared to the current County of San Bernardino VMT threshold of 33.3 VMT per service population. Additionally, as noted above, the City directs the analyst to identify if the project is consistent with the existing land use within that

TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing the data from the travel demand model

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 72.1 using OD VMT per service population in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 33.3 OD VMT per service population (116.32% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

However, City guidelines state that “In some cases, it may be appropriate to extract the Project-generated VMT using the production-attraction trip matrix. This may be appropriate when a project is entirely composed of retail or office uses, and there is a need to isolate the home-based work (HBW) VMT for purposes of isolating commute VMT. The City should evaluate the appropriate methodology based on the project land use types and context.”

The San Bernardino County Transportation Impact Study Guidelines (July 9, 2019) states under Section 4.1 (CEQA Assessment – VMT Analysis: Analysis Methodology), “Consistent with OPR guidelines, the following specific components will be utilized to complete a VMT impact assessment:

- Employment Projects – VMT/Employee for only the home-based work trip purpose (attractions) and would apply to office, industrial, governmental, and institutional projects.”

The project is an 100% industrial land use. Therefore, all trips to/from the project site are work-based trips. Therefore, it is appropriate to analyze the project site using the production-attraction trip matrix for VMT per worker, since VMT per worker measures the average (mean) distance a worker drives to work by vehicle in a given period of time.

Based on review of the SBCTA VMT Screening Tool, the proposed project is located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 13.3 using PA VMT per worker in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 16.9 PA VMT per worker (-21.6% difference); therefore, the proposed project can be presumed to result in a less than significant VMT impact under this screening criteria.

Although the City of Hesperia guidelines state that the appropriate baseline project TAZ OD VMT per service population should be compared to the baseline County of San Bernardino OD VMT per service population, Ganddini Group, Inc. recommends an exemption be applied to this project based on the project TAZ characteristics as identified, and guidance from San Bernardino County regarding the method for evaluating VMT for industrial projects.

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

The following additional uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local serving K-12 schools
- Local parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local serving assembly uses (places of worship, community organizations)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects generating less than 110 daily vehicle trips. This generally corresponds to the following “typical” development potentials:
 - 11 single family housing units
 - 16 multi-family, condominiums, or townhouse housing units
 - 10,000 square feet of office
 - 15,000 square feet of light industrial
 - 63,000 square feet of warehousing
 - 79,000 square feet of high-cube transload and short-term storage warehouse

Based on review of project type screening, the proposed project is greater than 63,000 square feet of warehousing; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Screening Assessment Finding

The proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

Although the City of Hesperia guidelines state that the appropriate baseline project TAZ OD VMT per service population should be compared to the baseline County of San Bernardino OD VMT per service population, the project is considered to be in a low VMT generating area based on the PA VMT per worker metric within the SBCTA VMT Screening Tool. PA VMT per worker is the appropriate metric when evaluating industrial projects according to the County of San Bernardino guidelines.

This recommended exemption is based on review of the SBCTA VMT Screening Tool, the proposed project is located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 13.3 using PA VMT per worker in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 16.9 PA VMT per worker (-21.6% difference); therefore, the proposed project can be presumed to result in a less than significant VMT impact under this screening criteria.

Thus, it appears that the project does meet the intent for the screening criteria for low-VMT generating areas, as specified within the Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) [“Technical Advisory”] and San Bernardino County Transportation Impact Study Guidelines (July 9, 2019)

Ganddini Group, Inc. recommends a detailed VMT analysis exemption be applied to this project based on the project TAZ characteristics as identified, and guidance from San Bernardino County and OPR regarding the method for evaluating VMT for residential projects.

CONCLUSION

We appreciate the opportunity to provide this scoping document for your review. Should you have any questions or comments regarding the proposed scope, please contact Bryan Crawford at (714) 795-3100 x 104 or bryan@ganddini.com.

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)

Size: 545,000 TSF

TRIP GENERATION RATES PER TSF ¹								
Vehicle Type	Source ²	AM Peak Hour			PM Peak Hour			Daily Rate
		In	Out	Rate	In	Out	Rate	
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
Vehicle Type	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Passenger Car	57	14	71	32	50	82	861
Trucks							
2-Axle Trucks	1	1	2	1	1	2	21
3-Axle Trucks	1	1	2	1	1	2	26
4+ Axle Trucks	3	3	6	2	2	4	78
Subtotal	5	5	10	4	4	8	125
Total Vehicle Trips Generated	62	19	81	36	54	90	986

PCE ³ TRIPS GENERATED							
Vehicle Type	PCE Factor ⁴	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Passenger Car	1.0	57	14	71	32	50	82
Trucks							
2-Axle Trucks	1.5	2	2	4	2	2	4
3-Axle Trucks	2.0	2	2	4	2	2	4
4+ Axle Trucks	3.0	9	9	18	6	6	12
Subtotal		13	13	26	10	10	20
Total PCE Trips Generated		70	27	97	42	60	102

Notes:

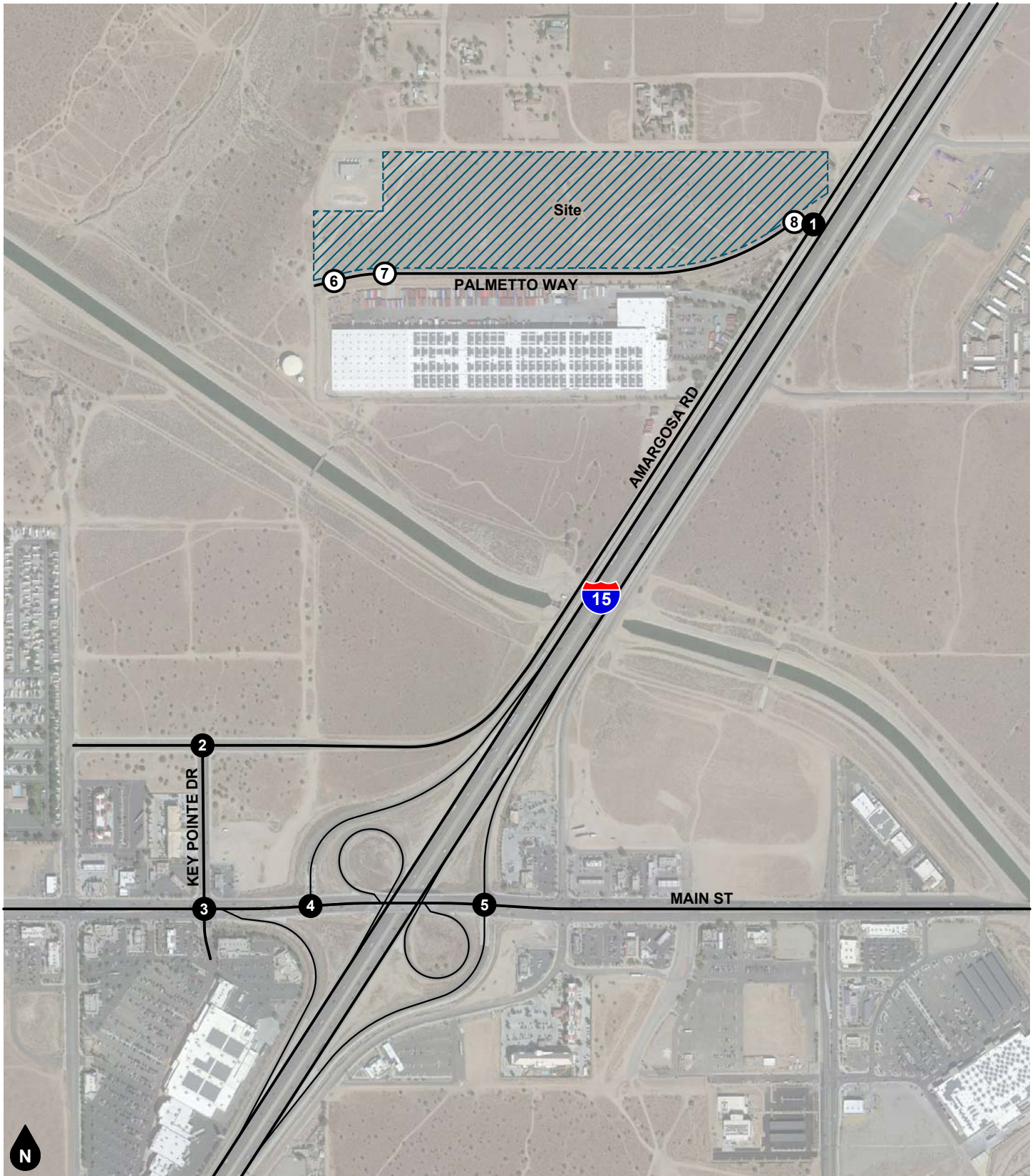
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.

SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.



Legend

- # Study Intersection
- # Project Driveway

Figure 1
Project Location Map



Amargosa and Palmeto High-Cube Warehouse
Traffic Impact Analysis
19522

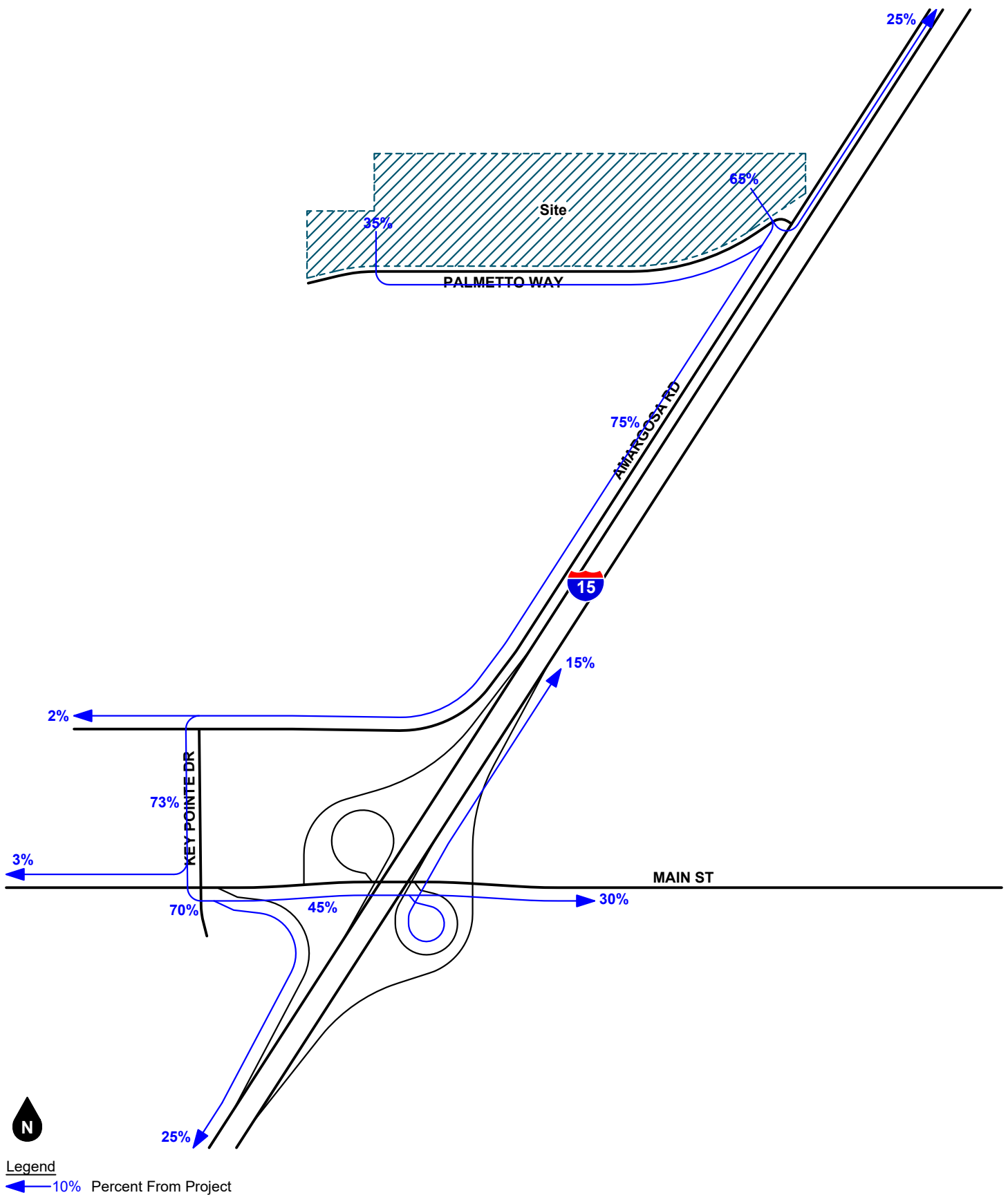


Figure 3
Project Outbound Trip Distribution - Cars

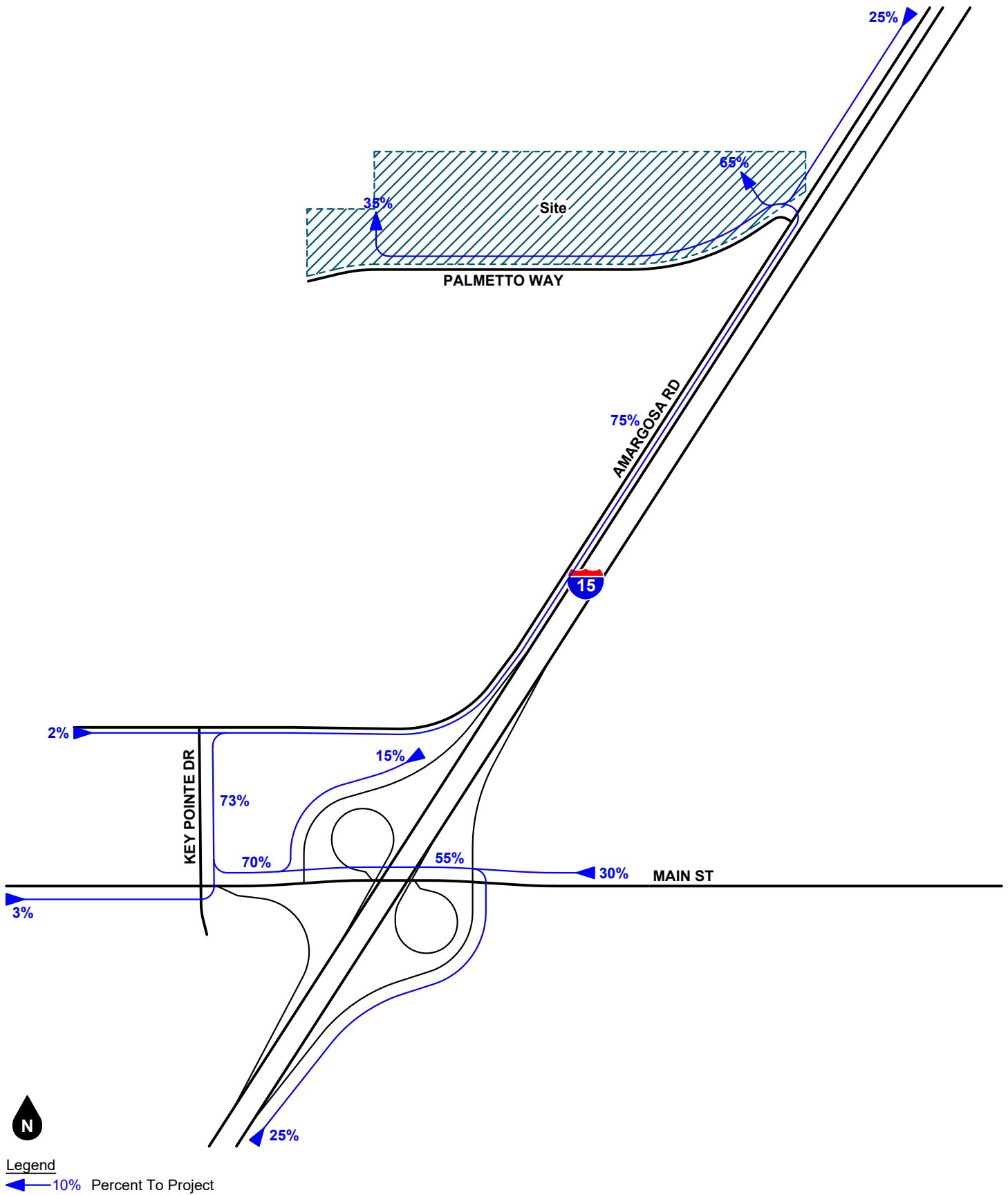


Figure 4
Project Inbound Trip Distribution - Cars

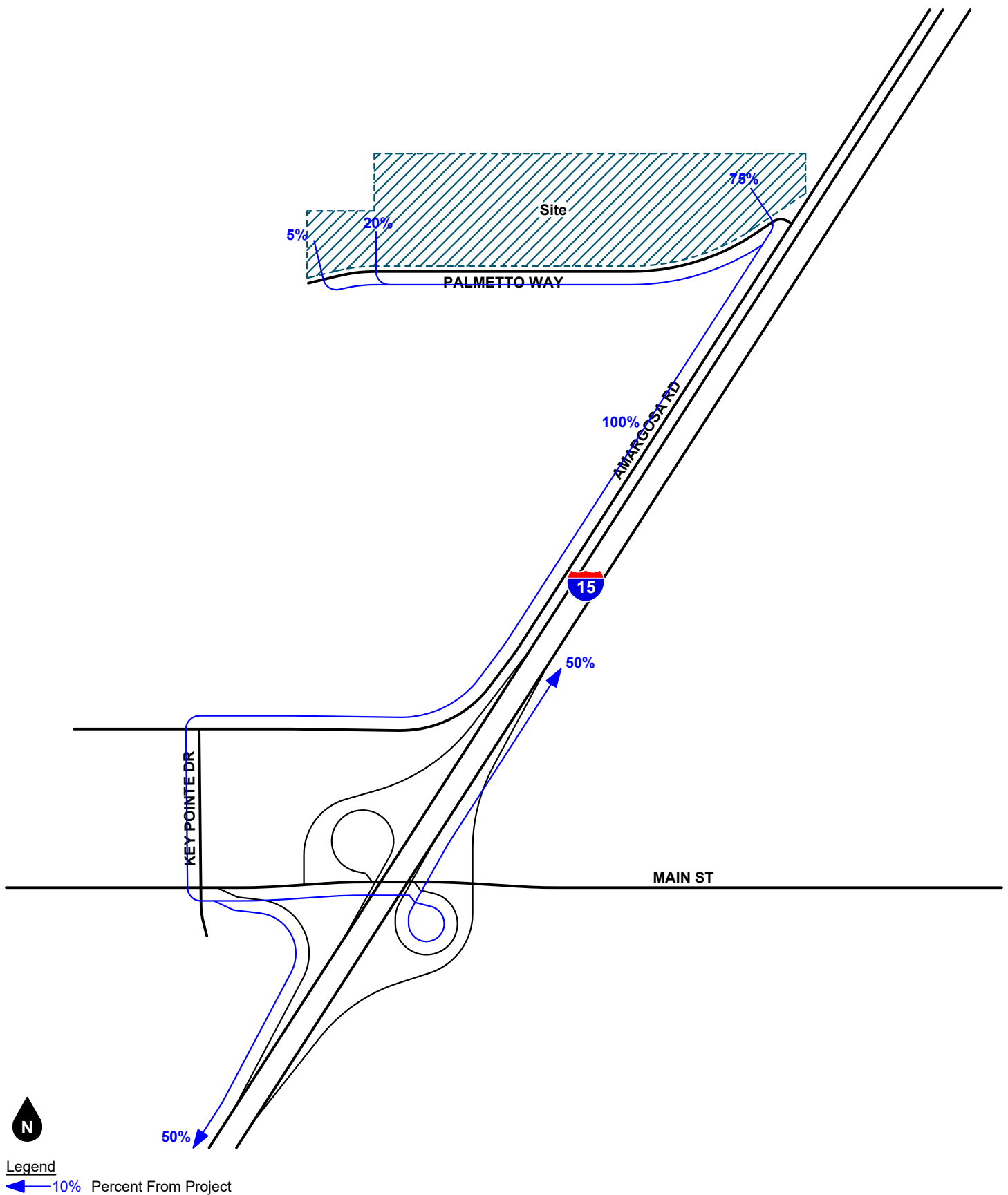


Figure 5
Project Outbound Trip Distribution - Trucks

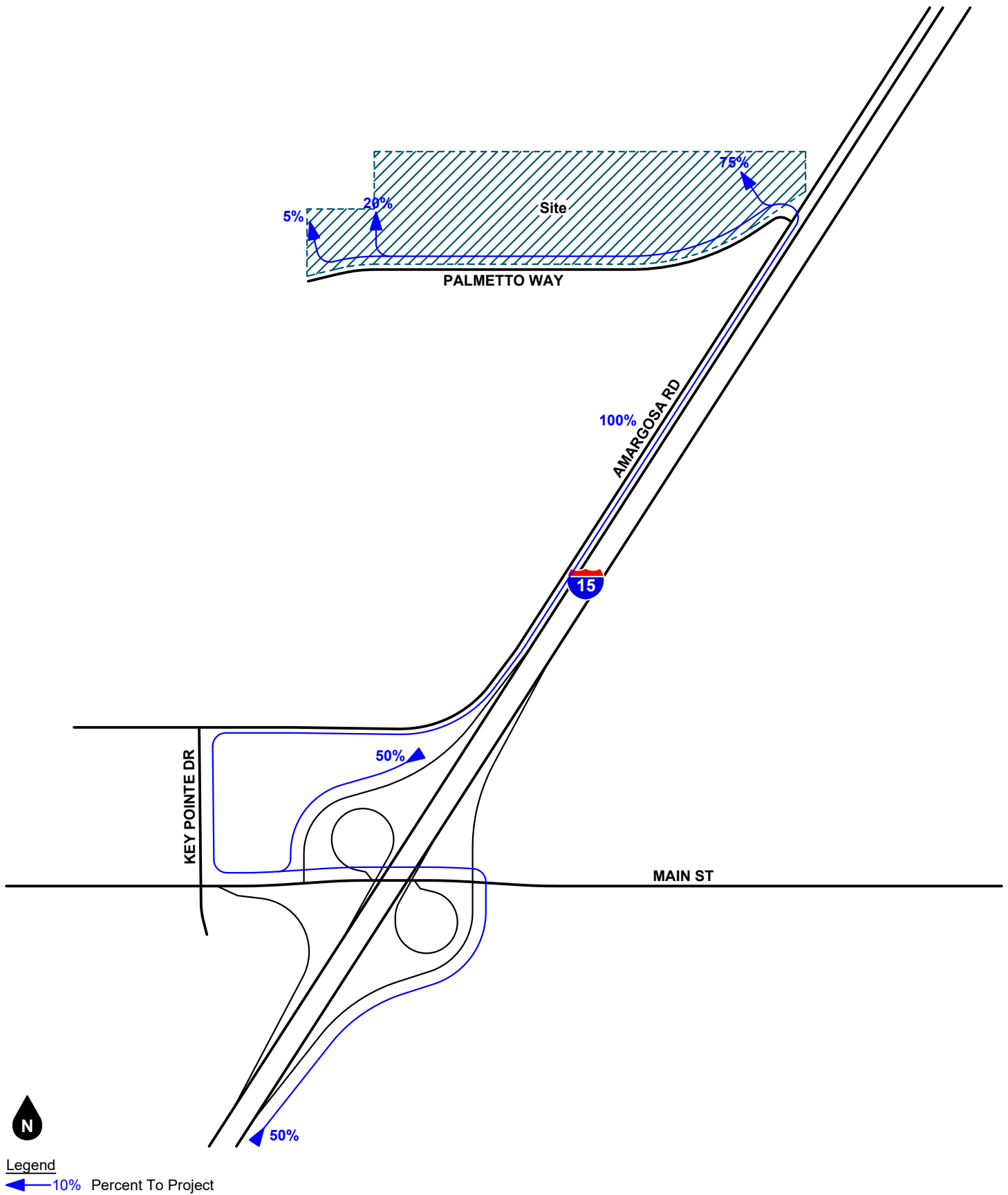


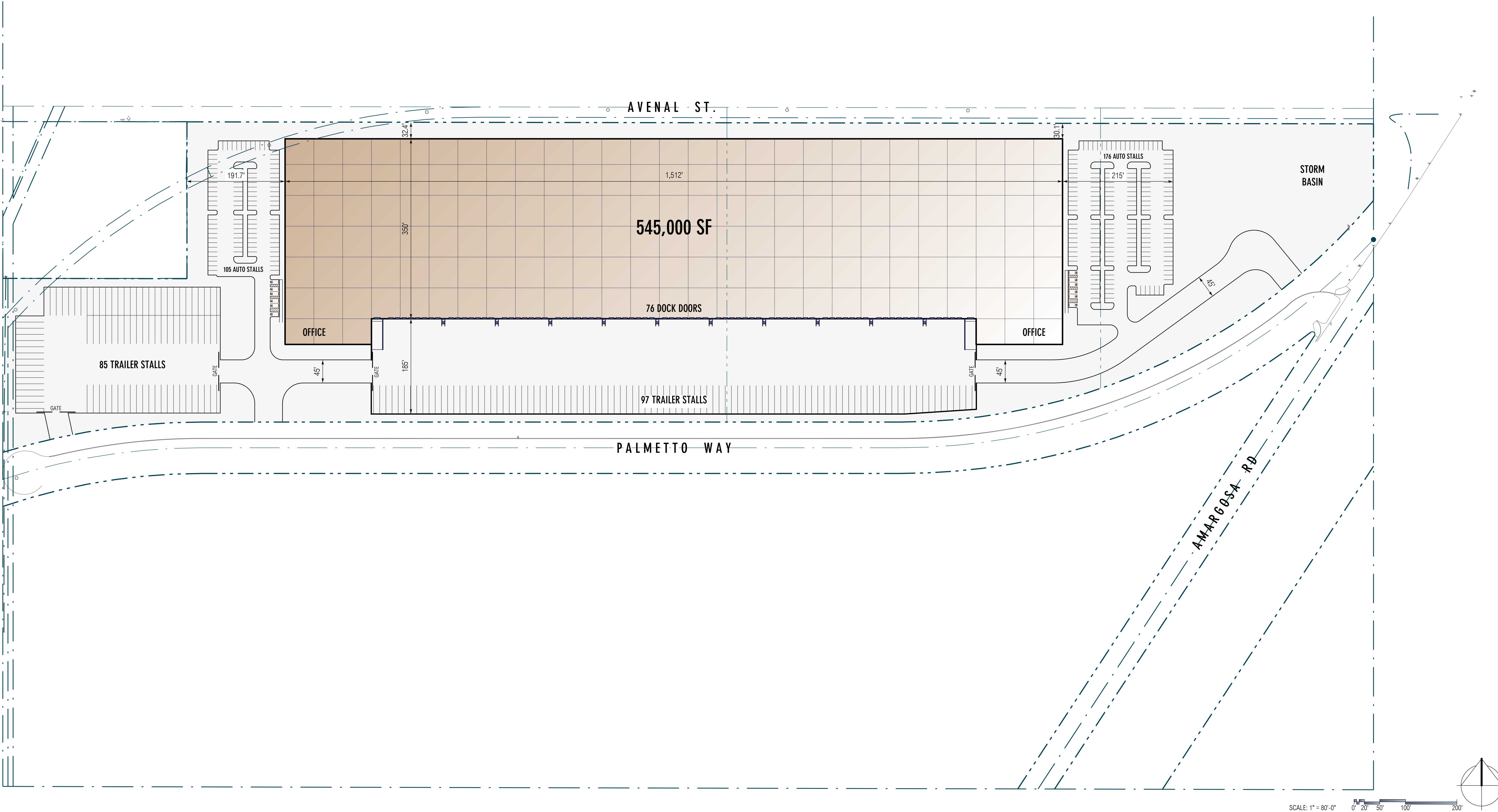
Figure 6
Project Inbound Trip Distribution - Trucks

Appendix A

Site Plan

PROJECT DATA:

ZONE:	
APPROX. SITE AREA:	1,329,521 SF 30.52 AC
BUILDING AREA:	545,000 SF
COVERAGE:	41.0 %



RGAA

Office of Architectural Design

15231 Alton Parkway, Suite 100
Irvine, CA 92618
T 949-341-0920
FX 949-341-0922

SPEC. INDUSTRIAL

PALMETTO WAY - HESPERIA, CA

PRELIMINARY SITE PLAN - SCHEME 02

				RGA PROJECT NO:	21073.00
				CAD FILE NAME:	21073-00-A1-03
				DRAWN BY:	CS
				CHK'D BY:	CS
				COPYRIGHT: RGA, OFFICE OF ARCHITECTURAL DESIGN	
				SHEET TITLE	
				A1-03	
MARK	7/19/21	CONCEPTUAL SITE PLAN			
	DATE	DESCRIPTION			

APPENDIX C

VOLUME COUNT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Wed, May 25, 22

LOCATION:
NORTH & SOUTH: Hesperia
EAST & WEST: Amargosa
Palmeto

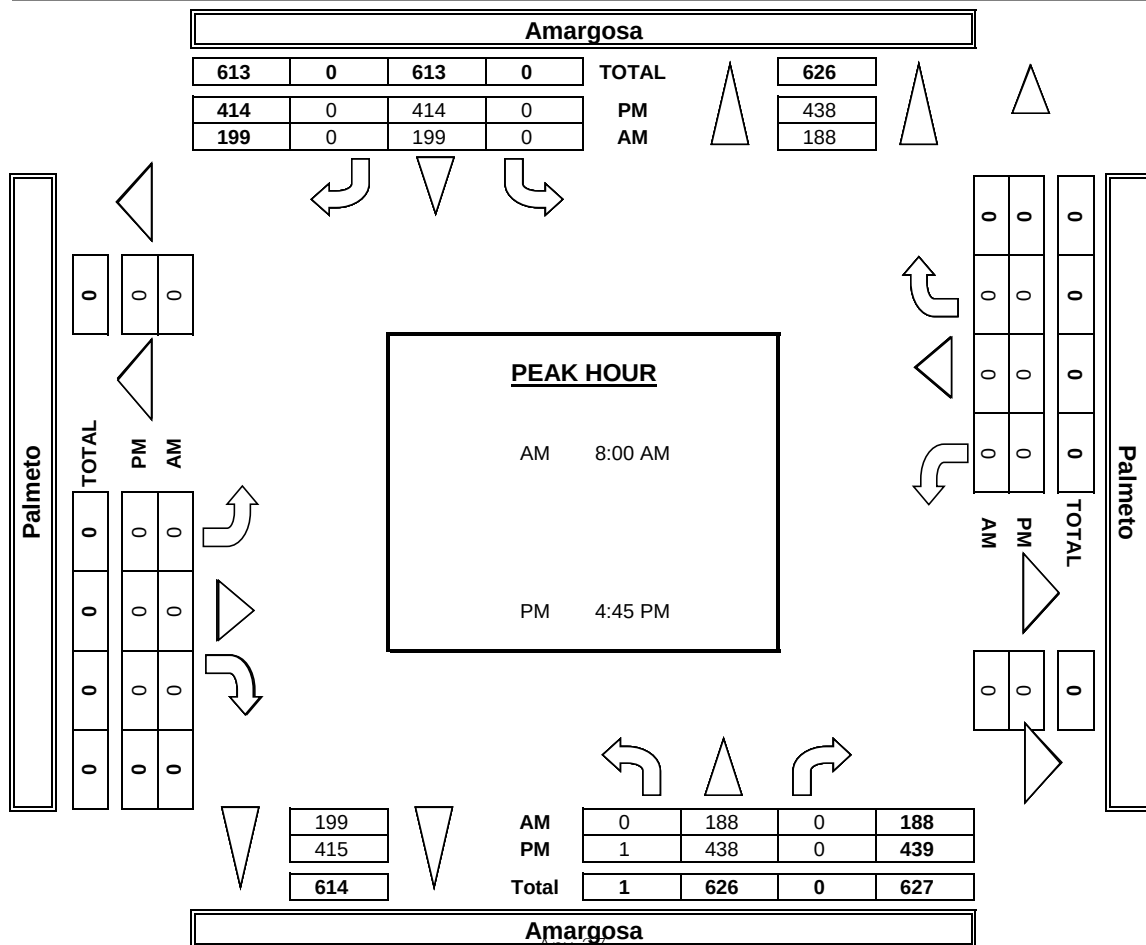
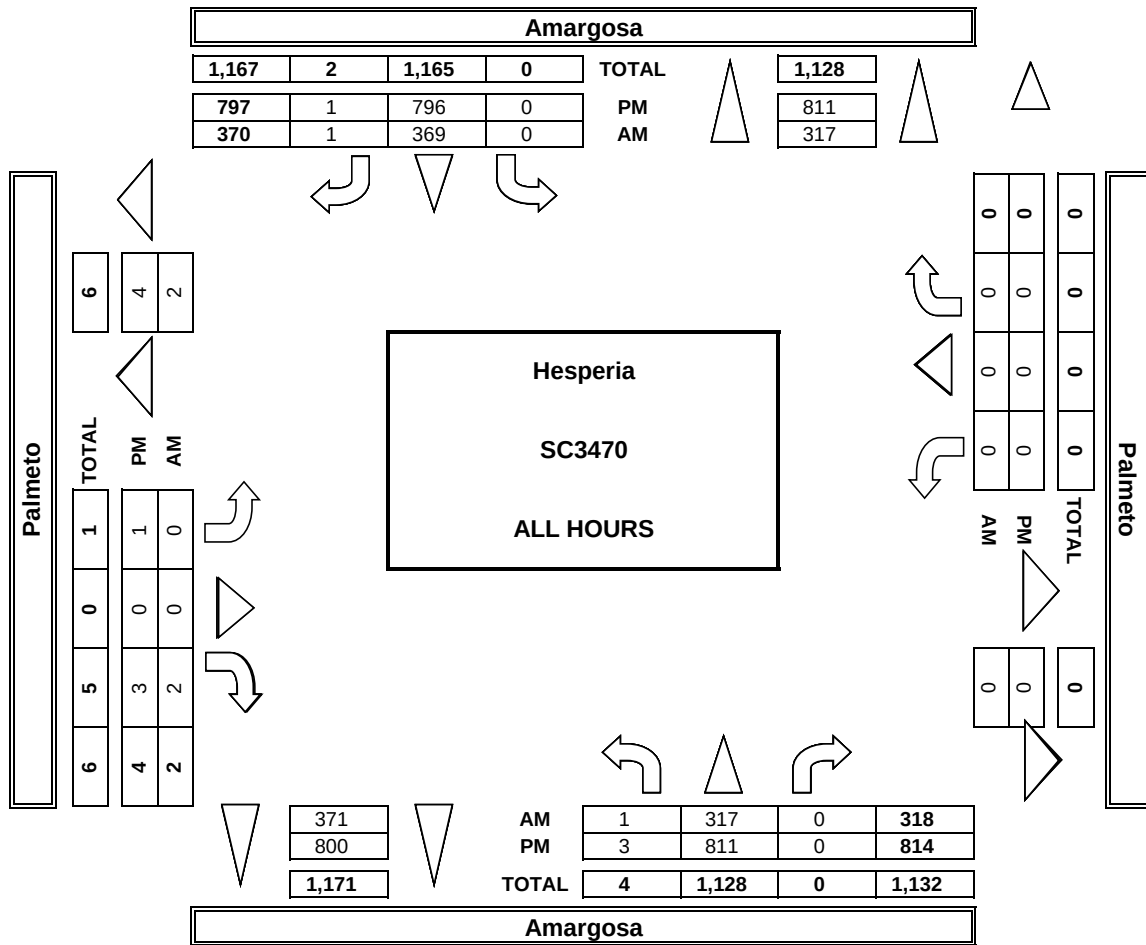
PROJECT #: SC3470
LOCATION #: 1
CONTROL: STOP E

NOTES:										AM		▲	
										PM		N	
										MD	◀ W		E ▶
										OTHER		S	
										OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Amargosa			Amargosa			Palmeto			Palmeto			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	X	X	1	0	0	X	0	X	X	X	

	7:00 AM	0	31	0	0	34	0	0	0	0	0	0	65
	7:15 AM	0	24	0	0	43	1	0	0	1	0	0	69
	7:30 AM	1	26	0	0	48	0	0	0	1	0	0	76
	7:45 AM	0	48	0	0	45	0	0	0	0	0	0	93
	8:00 AM	0	36	0	0	43	0	0	0	0	0	0	79
	8:15 AM	0	38	0	0	71	0	0	0	0	0	0	109
	8:30 AM	0	62	0	0	36	0	0	0	0	0	0	98
	8:45 AM	0	52	0	0	49	0	0	0	0	0	0	101
VOLUMES	1	317	0	0	369	1	0	0	2	0	0	0	690
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
APP/DEPART	318	/	317	370	/	371	2	/	0	0	/	2	0
BEGIN PEAK HR	8:00 AM												
VOLUMES	0	188	0	0	199	0	0	0	0	0	0	0	387
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.758			0.701			0.000			0.000			0.888
APP/DEPART	188	/	188	199	/	199	0	/	0	0	/	0	0
	04:00 PM	1	102	0	0	88	0	0	0	3	0	0	194
	4:15 PM	1	91	0	0	98	0	0	0	0	0	0	190
	4:30 PM	0	96	0	0	103	1	1	0	0	0	0	201
	4:45 PM	0	96	0	0	108	0	0	0	0	0	0	204
	5:00 PM	0	131	0	0	102	0	0	0	0	0	0	233
	5:15 PM	0	92	0	0	112	0	0	0	0	0	0	204
	5:30 PM	1	119	0	0	92	0	0	0	0	0	0	212
	5:45 PM	0	84	0	0	93	0	0	0	0	0	0	177
VOLUMES	3	811	0	0	796	1	1	0	3	0	0	0	1,615
APPROACH %	0%	100%	0%	0%	100%	0%	25%	0%	75%	0%	0%	0%	
APP/DEPART	814	/	811	797	/	800	4	/	0	0	/	4	0
BEGIN PEAK HR	4:45 PM												
VOLUMES	1	438	0	0	414	0	0	0	0	0	0	0	853
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.838			0.924			0.000			0.000			0.915
APP/DEPART	439	/	438	414	/	415	0	/	0	0	/	0	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Amargosa Palmeto	PROJECT #: LOCATION #: CONTROL:	SC3470 1 STOP E

PCE Adjusted	NOTES:								AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

	NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto			
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL

AM	7:00 AM	0	33	0	0	34	0	0	0	0	0	0	67	
	7:15 AM	0	25	0	0	47	1	0	0	1	0	0	73	
	7:30 AM	1	27	0	0	52	0	0	0	1	0	0	81	
	7:45 AM	0	52	0	0	47	0	0	0	0	0	0	99	
	8:00 AM	0	39	0	0	45	0	0	0	0	0	0	84	
	8:15 AM	0	39	0	0	76	0	0	0	0	0	0	115	
	8:30 AM	0	65	0	0	36	0	0	0	0	0	0	101	
	8:45 AM	0	54	0	0	52	0	0	0	0	0	0	105	
	VOLUMES	1	333	0	0	388	1	0	0	2	0	0	0	724
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
APP/DEPART	334	/	333	389	/	390	2	/	0	0	/	2	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	197	0	0	208	0	0	0	0	0	0	0	405	
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.756			0.684			0.000			0.000			0.879	
APP/DEPART	197	/	197	208	/	208	0	/	0	0	/	0	0	
PM	04:00 PM	1	104	0	0	90	0	0	0	4	0	0	0	198
	4:15 PM	1	95	0	0	100	0	0	0	0	0	0	0	196
	4:30 PM	0	101	0	0	106	1	1	0	0	0	0	0	209
	4:45 PM	0	97	0	0	108	0	0	0	0	0	0	0	205
	5:00 PM	0	134	0	0	103	0	0	0	0	0	0	0	236
	5:15 PM	0	94	0	0	114	0	0	0	0	0	0	0	207
	5:30 PM	1	119	0	0	93	0	0	0	0	0	0	0	213
	5:45 PM	0	86	0	0	93	0	0	0	0	0	0	0	179
	VOLUMES	3	828	0	0	805	1	1	0	4	0	0	0	1,642
	APPROACH %	0%	100%	0%	0%	100%	0%	20%	0%	80%	0%	0%	0%	
	APP/DEPART	831	/	829	806	/	809	5	/	0	0	/	4	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	1	443	0	0	417	0	0	0	0	0	0	0	861
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.831			0.917			0.000			0.000			0.912	
APP/DEPART	444	/	443	417	/	417	0	/	0	0	/	1	0	

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/25/22
WEDNESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Amargosa
Palmeto

PROJECT #: SC3470
LOCATION #: 1
CONTROL: STOP E

CLASS 1:	NOTES:	AM	PM	MD	OTHER	OTHER
PASSENGER VEHICLES						

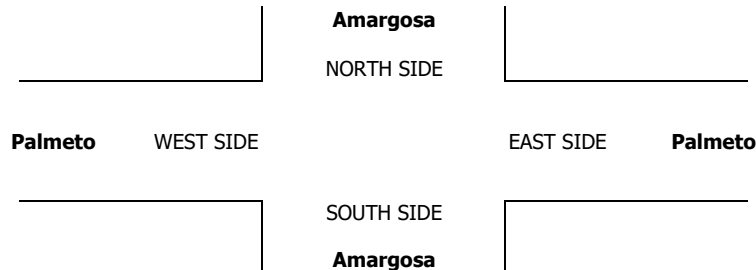
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Amargosa			Amargosa			Palmeto			Palmeto			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	X	X	1	0	0	X	0	X	X	X	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	28	0	0	34	0	0	0	0	0	0	62	
	7:15 AM	0	23	0	0	40	1	0	0	1	0	0	65	
	7:30 AM	1	24	0	0	43	0	0	0	1	0	0	69	
	7:45 AM	0	42	0	0	42	0	0	0	0	0	0	84	
	8:00 AM	0	34	0	0	40	0	0	0	0	0	0	74	
	8:15 AM	0	36	0	0	65	0	0	0	0	0	0	101	
	8:30 AM	0	59	0	0	36	0	0	0	0	0	0	95	
	8:45 AM	0	49	0	0	47	0	0	0	0	0	0	96	
	VOLUMES	1	295	0	0	347	1	0	0	2	0	0	0	646
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
APP/DEPART	296	/	295	348	/	349	2	/	0	0	/	2	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	178	0	0	188	0	0	0	0	0	0	0	366	
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.754			0.723			0.000			0.000			0.906	
APP/DEPART	178	/	178	188	/	188	0	/	0	0	/	0	0	
PM	04:00 PM	1	100	0	0	85	0	0	0	1	0	0	0	187
	4:15 PM	1	86	0	0	95	0	0	0	0	0	0	0	182
	4:30 PM	0	90	0	0	100	1	1	0	0	0	0	0	192
	4:45 PM	0	94	0	0	108	0	0	0	0	0	0	0	202
	5:00 PM	0	127	0	0	101	0	0	0	0	0	0	0	228
	5:15 PM	0	89	0	0	109	0	0	0	0	0	0	0	198
	5:30 PM	1	119	0	0	91	0	0	0	0	0	0	0	211
	5:45 PM	0	81	0	0	93	0	0	0	0	0	0	0	174
	VOLUMES	3	786	0	0	782	1	1	0	1	0	0	0	1,574
	APPROACH %	0%	100%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%	
	APP/DEPART	789	/	786	783	/	784	2	/	0	0	/	4	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	0	429	0	0	409	0	0	0	0	0	0	0	839
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.846			0.938			0.000			0.000			0.920	
APP/DEPART	430	/	429	409	/	410	0	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
1	0	1	0	2



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Amargosa Palmeto	PROJECT #: LOCATION #: CONTROL:	SC3470 1 STOP E

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶

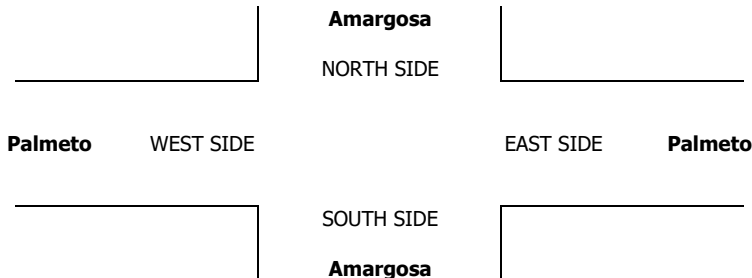
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Amargosa			Amargosa			Palmeto			Palmeto			
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
	7:30 AM	0	2	0	0	4	0	0	0	0	0	0	0	6
	7:45 AM	0	4	0	0	2	0	0	0	0	0	0	0	6
	8:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
	8:15 AM	0	2	0	0	4	0	0	0	0	0	0	0	6
	8:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
	8:45 AM	0	3	0	0	1	0	0	0	0	0	0	0	4
	VOLUMES	0	17	0	0	15	0	0	0	0	0	0	0	32
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	17	/	17	15	/	15	0	/	0	0	/	0	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	7	0	0	8	0	0	0	0	0	0	0	15	
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.583			0.500			0.000			0.000			0.625	
APP/DEPART	7	/	7	8	/	8	0	/	0	0	/	0	0	
PM	04:00 PM	0	1	0	0	3	0	0	0	2	0	0	0	6
	4:15 PM	0	4	0	0	3	0	0	0	0	0	0	0	7
	4:30 PM	0	4	0	0	2	0	0	0	0	0	0	0	6
	4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
	5:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	4
	5:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	6
	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	5:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	3
	VOLUMES	0	20	0	0	13	0	0	0	2	0	0	0	35
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	20	/	20	13	/	15	2	/	0	0	/	0	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	0	8	0	0	5	0	0	0	0	0	0	0	13
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.667			0.417			0.000			0.000			0.542	
APP/DEPART	8	/	8	5	/	5	0	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Amargosa Palmeto	PROJECT #: LOCATION #: CONTROL:	SC3470 1 STOP E

CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

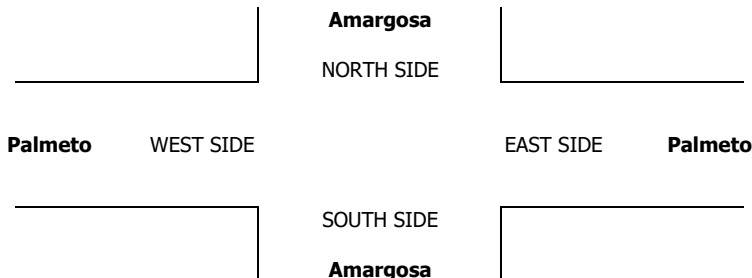
	NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto			
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	0	0	0	0	0	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	2
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	04:00 PM	0	1	0	0	0	0	0	0	0	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	0	0	0	0	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	2
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Amargosa Palmeto	PROJECT #: LOCATION #: CONTROL:	SC3470 1 STOP E

CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

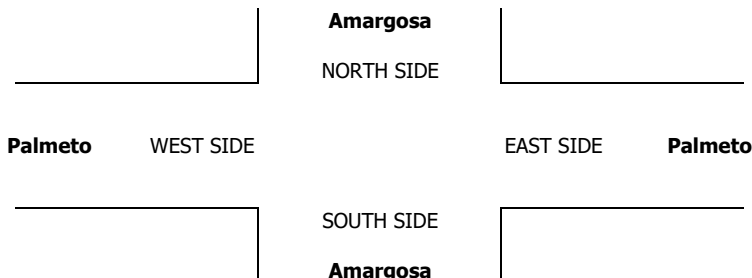
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Amargosa			Amargosa			Palmeto			Palmeto			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	X	X	1	0	0	X	0	X	X	X	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	1	0	0	0	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	1
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	1
	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	1	0	0	0	0	0	0	1
	VOLUMES	0	2	0	0	4	0	0	0	0	0	0	6
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	2	/	2	4	/	4	0	/	0	0	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	4
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.500			0.500			0.000			0.000		
	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	0	0	0	0	0	0	0	0	1
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	1	0	0	0	0	0	0	3
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Amargosa Palmeto	PROJECT #: LOCATION #: CONTROL:	SC3470 1 STOP E

CLASS 5:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	▶ E
RV				

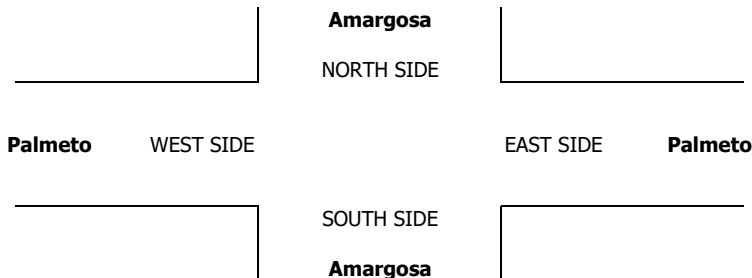
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Amargosa			Amargosa			Palmeto			Palmeto			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	X	X	1	0	0	X	0	X	X	X	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/25/22
WEDNESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Amargosa
Palmeto

PROJECT #:
LOCATION #:
CONTROL:

SC3470
1
STOP E

CLASS 6:	NOTES:	AM		▲	
BUSES		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

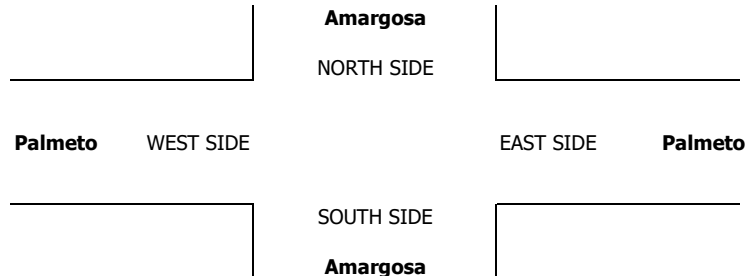
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Amargosa			Amargosa			Palmeto			Palmeto			
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	1	0	0	0	0	0	0	1
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	1
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	3	0	0	0	0	0	0	4
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	2
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.250			0.250			0.000			0.000		
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0
	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.250			0.000			0.000			0.000		
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Wed, May 25, 22

LOCATION: Hesperia
NORTH & SOUTH: Key Pointe
EAST & WEST: Amargosa

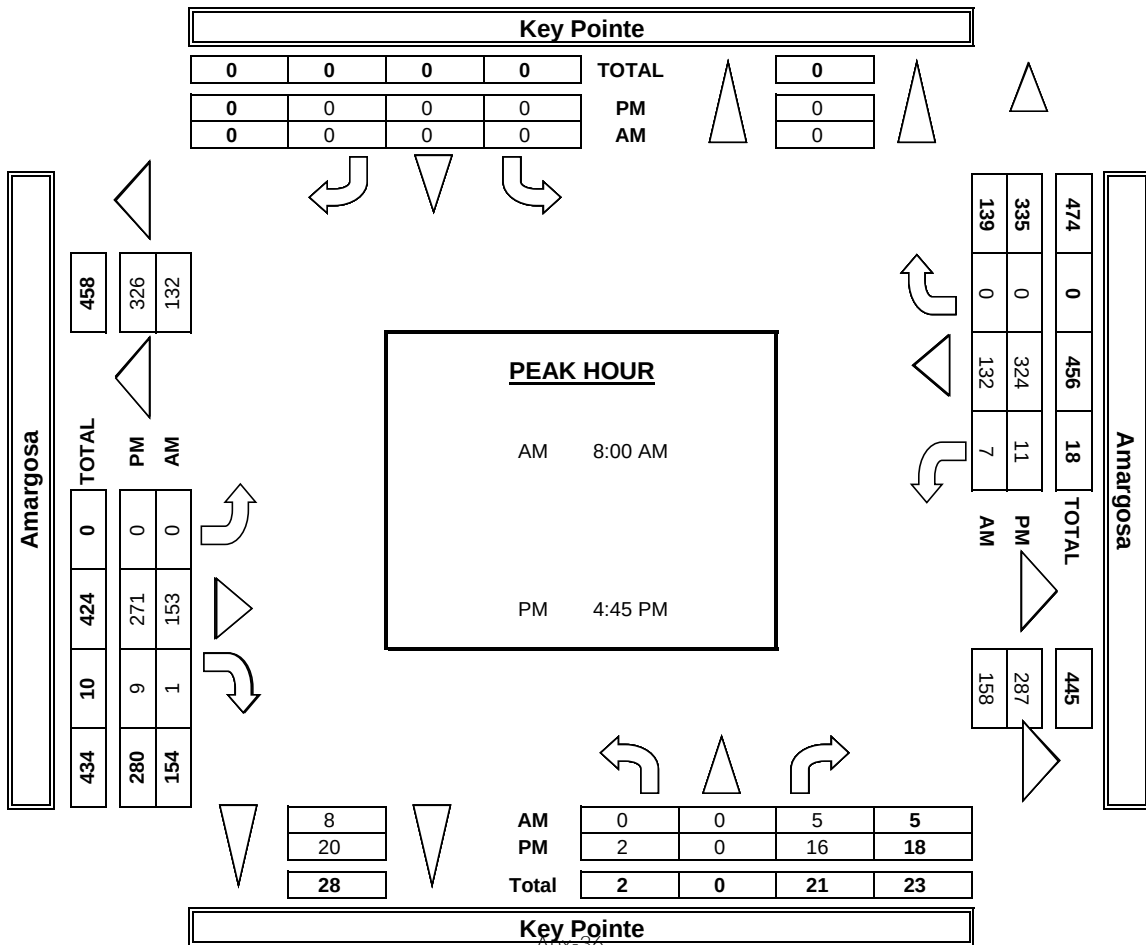
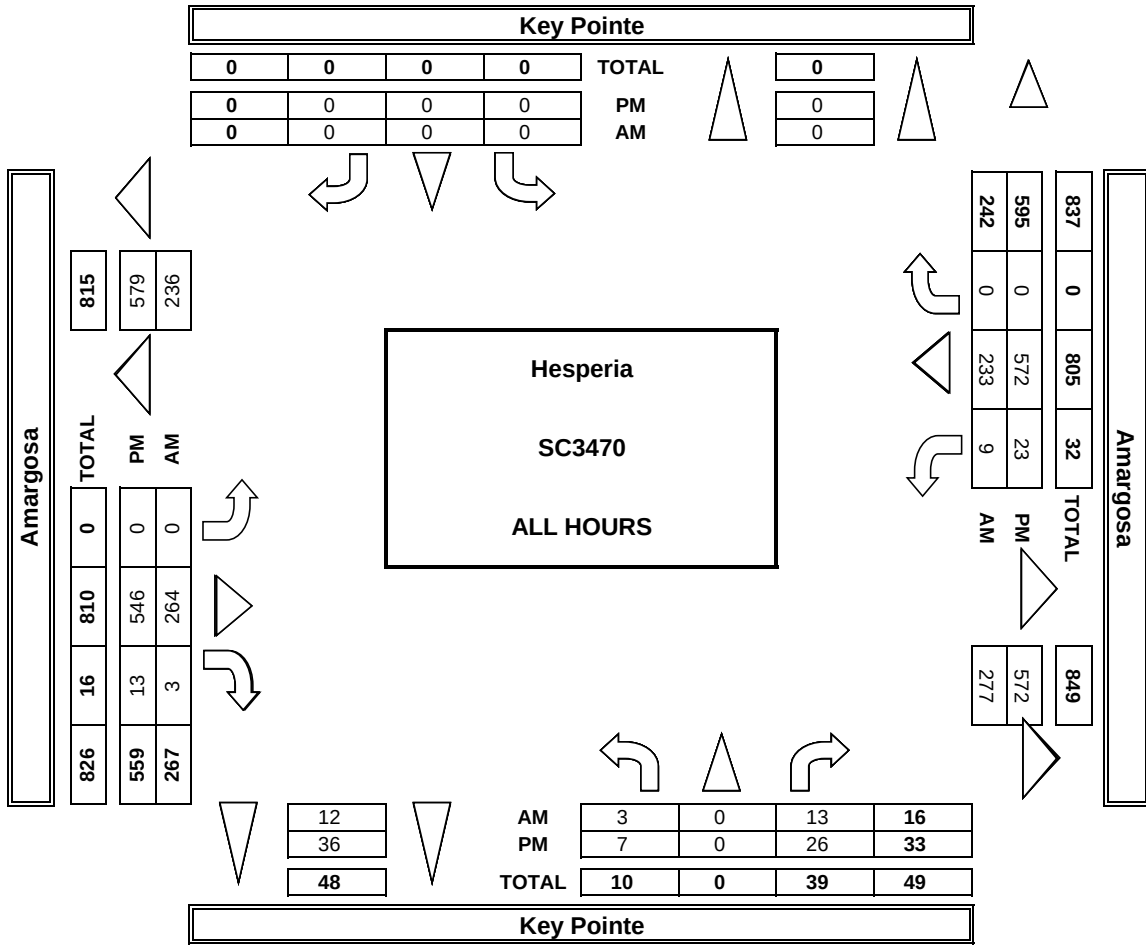
PROJECT #: SC3470
LOCATION #: 4
CONTROL: STOP N

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Amargosa			Amargosa			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	X	1	X	X	X	X	2	0	0	2	X	

7:00 AM	2	0	1	0	0	0	0	22	0	0	26	0	51
7:15 AM	0	0	2	0	0	0	0	20	0	1	21	0	44
7:30 AM	0	0	3	0	0	0	0	39	1	1	22	0	66
7:45 AM	1	0	2	0	0	0	0	30	1	0	32	0	66
8:00 AM	0	0	1	0	0	0	0	33	1	3	18	0	56
8:15 AM	0	0	0	0	0	0	0	58	0	4	25	0	87
8:30 AM	0	0	3	0	0	0	0	28	0	0	51	0	82
8:45 AM	0	0	1	0	0	0	0	34	0	0	38	0	73
VOLUMES	3	0	13	0	0	0	0	264	3	9	233	0	525
APPROACH %	19%	0%	81%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
APP/DEPART	16	/	0	0	/	12	267	/	277	242	/	236	0
BEGIN PEAK HR	8:00 AM												
VOLUMES	0	0	5	0	0	0	0	153	1	7	132	0	298
APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
PEAK HR FACTOR	0.417			0.000			0.664			0.681			0.856
APP/DEPART	5	/	0	0	/	8	154	/	158	139	/	132	0
04:00 PM	3	0	3	0	0	0	0	62	2	4	61	0	135
4:15 PM	0	0	2	0	0	0	0	73	0	3	59	0	137
4:30 PM	1	0	4	0	0	0	0	73	2	4	69	0	153
4:45 PM	0	0	3	0	0	0	0	71	5	2	77	0	158
5:00 PM	0	0	4	0	0	0	0	65	1	2	97	0	169
5:15 PM	0	0	3	0	0	0	0	70	3	2	65	0	143
5:30 PM	2	0	6	0	0	0	0	65	0	5	85	0	163
5:45 PM	1	0	1	0	0	0	0	67	0	1	59	0	129
VOLUMES	7	0	26	0	0	0	0	546	13	23	572	0	1,187
APPROACH %	21%	0%	79%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
APP/DEPART	33	/	0	0	/	36	559	/	572	595	/	579	0
BEGIN PEAK HR	4:45 PM												
VOLUMES	2	0	16	0	0	0	0	271	9	11	324	0	633
APPROACH %	11%	0%	89%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
PEAK HR FACTOR	0.563			0.000			0.921			0.846			0.936
APP/DEPART	18	/	0	0	/	20	280	/	287	335	/	326	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/25/22
WEDNESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Key Pointe
Amargosa

PROJECT #: SC3470
LOCATION #: 4
CONTROL: STOP N

PCE Adjusted	NOTES:								AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa			
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL

AM	7:00 AM	3	0	1	0	0	0	0	22	0	0	27	0	53
	7:15 AM	0	0	2	0	0	0	0	22	0	1	22	0	47
	7:30 AM	0	0	5	0	0	0	0	44	1	3	24	0	77
	7:45 AM	2	0	2	0	0	0	0	32	1	0	34	0	71
	8:00 AM	0	0	1	0	0	0	0	34	1	3	22	0	61
	8:15 AM	0	0	0	0	0	0	0	66	0	4	27	0	96
	8:30 AM	0	0	3	0	0	0	0	28	0	0	53	0	84
	8:45 AM	0	0	1	0	0	0	0	36	0	0	41	0	78
	VOLUMES	4	0	15	0	0	0	0	283	3	11	249	0	565
	APPROACH %	21%	0%	79%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
	APP/DEPART	19	/	0	0	/	14	286	/	298	260	/	253	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	5	0	0	0	0	163	1	7	142	0	318
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
	PEAK HR FACTOR	0.417			0.000			0.626			0.710			0.828
PM	APP/DEPART	5	/	0	0	/	8	164	/	168	149	/	142	0
	04:00 PM	3	0	4	0	0	0	0	73	2	6	63	0	150
	4:15 PM	0	0	2	0	0	0	0	79	0	4	64	0	148
	4:30 PM	1	0	5	0	0	0	0	74	3	4	71	0	157
	4:45 PM	0	0	4	0	0	0	0	73	5	2	80	0	164
	5:00 PM	0	0	5	0	0	0	0	68	1	2	102	0	177
	5:15 PM	0	0	4	0	0	0	0	73	3	2	70	0	152
	5:30 PM	3	0	7	0	0	0	0	70	0	6	89	0	174
	5:45 PM	1	0	1	0	0	0	0	67	0	1	62	0	132
	VOLUMES	8	0	30	0	0	0	0	575	14	27	599	0	1,251
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
	APP/DEPART	37	/	0	0	/	40	588	/	604	626	/	607	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	3	0	19	0	0	0	0	283	9	12	341	0	666
	APPROACH %	12%	0%	88%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
	PEAK HR FACTOR	0.583			0.000			0.936			0.847			0.940
	APP/DEPART	21	/	0	0	/	21	292	/	302	353	/	343	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/25/22
WEDNESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Key Pointe
Amargosa

PROJECT #:
LOCATION #:
CONTROL:

SC3470
4
STOP N

CLASS 1:	NOTES:	AM	PM	MD	OTHER	OTHER
PASSENGER VEHICLES						

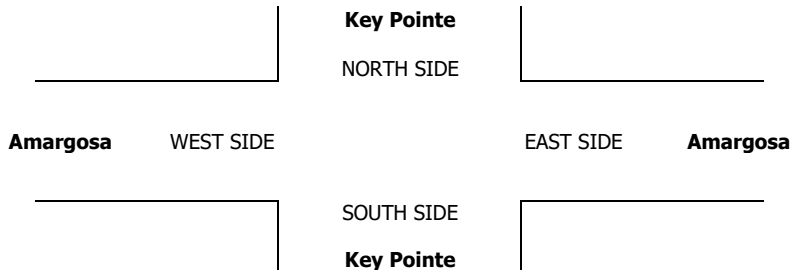
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Amargosa			Amargosa			
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	1	0	1	0	0	0	0	22	0	0	25	0	49
	7:15 AM	0	0	2	0	0	0	0	19	0	1	20	0	42
	7:30 AM	0	0	2	0	0	0	0	34	1	0	21	0	58
	7:45 AM	0	0	2	0	0	0	0	27	1	0	29	0	59
	8:00 AM	0	0	1	0	0	0	0	32	1	3	15	0	52
	8:15 AM	0	0	0	0	0	0	0	52	0	4	23	0	79
	8:30 AM	0	0	3	0	0	0	0	28	0	0	49	0	80
	8:45 AM	0	0	1	0	0	0	0	33	0	0	35	0	69
	VOLUMES	1	0	12	0	0	0	0	247	3	8	217	0	488
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
PM	APP/DEPART	13	/	0	0	/	11	250	/	259	225	/	218	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	5	0	0	0	0	145	1	7	122	0	280
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
	PEAK HR FACTOR	0.417			0.000			0.702			0.658			0.875
	APP/DEPART	5	/	0	0	/	8	146	/	150	129	/	122	0
	04:00 PM	3	0	2	0	0	0	0	53	2	2	59	0	121
	4:15 PM	0	0	2	0	0	0	0	67	0	2	56	0	127
	4:30 PM	1	0	3	0	0	0	0	72	1	4	66	0	147
	4:45 PM	0	0	2	0	0	0	0	70	5	2	74	0	153
	5:00 PM	0	0	3	0	0	0	0	63	1	2	91	0	160
	5:15 PM	0	0	1	0	0	0	0	67	3	2	62	0	135
	5:30 PM	1	0	5	0	0	0	0	62	0	3	82	0	153
	5:45 PM	1	0	1	0	0	0	0	67	0	1	57	0	127
	VOLUMES	6	0	19	0	0	0	0	521	12	18	547	0	1,123
	APPROACH %	24%	0%	76%	0%	0%	0%	0%	98%	2%	3%	97%	0%	
	APP/DEPART	25	/	0	0	/	30	533	/	540	565	/	553	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	1	0	11	0	0	0	0	262	9	9	309	0	601
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
	PEAK HR FACTOR	0.500			0.000			0.903			0.855			0.939
	APP/DEPART	12	/	0	0	/	18	271	/	273	318	/	310	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Amargosa	PROJECT #: LOCATION #: CONTROL:	SC3470 4 STOP N

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

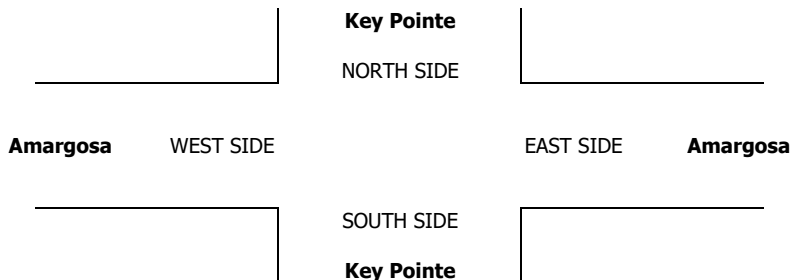
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Amargosa			Amargosa			
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	1	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	2	0	0	0	0	2
	7:45 AM	1	0	0	0	0	0	2	0	0	2	0	5
	8:00 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:15 AM	0	0	0	0	0	0	3	0	0	1	0	4
	8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2
	VOLUMES	2	0	0	0	0	0	8	0	0	6	0	16
	APPROACH %	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	2	/	0	0	/	0	8	/	8	6	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	4	0	0	4	0	8
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.333			0.500		
	APP/DEPART	0	/	0	0	/	0	4	/	4	4	/	0
	04:00 PM	0	0	1	0	0	0	5	0	0	1	0	7
	4:15 PM	0	0	0	0	0	0	3	0	1	1	0	5
	4:30 PM	0	0	1	0	0	0	1	1	0	2	0	5
	4:45 PM	0	0	1	0	0	0	0	0	0	2	0	3
	5:00 PM	0	0	1	0	0	0	1	0	0	2	0	4
	5:15 PM	0	0	2	0	0	0	2	0	0	1	0	5
	5:30 PM	1	0	1	0	0	0	1	0	2	0	0	5
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	1	0	7	0	0	0	13	1	3	10	0	35
	APPROACH %	13%	0%	88%	0%	0%	0%	93%	7%	23%	77%	0%	
	APP/DEPART	8	/	0	0	/	4	14	/	20	13	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	1	0	5	0	0	0	4	0	2	5	0	17
	APPROACH %	17%	0%	83%	0%	0%	0%	100%	0%	29%	71%	0%	
	PEAK HR FACTOR	0.750			0.000			0.500			0.875		
	APP/DEPART	6	/	0	0	/	2	4	/	9	7	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Amargosa	PROJECT #: LOCATION #: CONTROL:	SC3470 4 STOP N

CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S E ▶ ▼

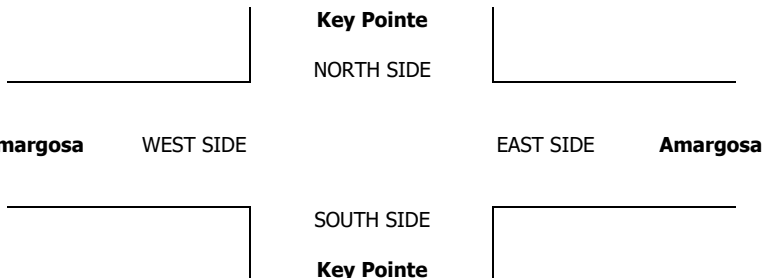
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Amargosa			Amargosa			
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	04:00 PM	0	0	0	0	0	0	0	0	2	1	0	3
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	2	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	2	4	0	6
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	33%	67%	0%	
	APP/DEPART	0	/	0	0	/	2	0	/	0	6	/	4
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	2	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.250		
	APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/25/22 WEDNESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Amargosa	PROJECT #: LOCATION #: CONTROL:	SC3470 4 STOP N

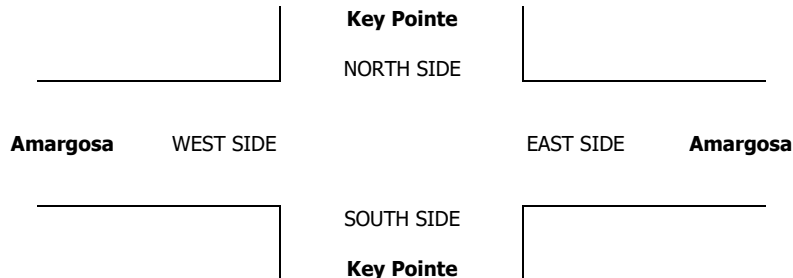
CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
	Key Pointe			Key Pointe			Amargosa			Amargosa				NB	SB	EB	WB	TTL
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL					

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	1	0	0	0	0	1	
	7:30 AM	0	0	1	0	0	0	1	0	1	1	0	4	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	
	8:15 AM	0	0	0	0	0	0	3	0	0	0	0	3	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	2	
	VOLUMES	0	0	1	0	0	0	6	0	1	3	0	11	
	APPROACH %	0%	0%	100%	0%	0%	0%	100%	0%	25%	75%	0%		
PM	APP/DEPART	1	/	0	0	/	1	6	/	7	4	/	3	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	0	0	0	0	4	0	0	2	0	6	
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
	PEAK HR FACTOR	0.000			0.000			0.333			0.500			0.500
	APP/DEPART	0	/	0	0	/	0	4	/	4	2	/	2	0
	04:00 PM	0	0	0	0	0	0	4	0	0	0	0	4	
	4:15 PM	0	0	0	0	0	0	1	0	0	2	0	3	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	1	0	0	1	0	2	
	5:00 PM	0	0	0	0	0	0	1	0	0	0	0	1	
	5:15 PM	0	0	0	0	0	0	1	0	0	2	0	3	
	5:30 PM	0	0	0	0	0	0	2	0	0	1	0	3	
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	
	VOLUMES	0	0	0	0	0	0	10	0	0	7	0	17	
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
	APP/DEPART	0	/	0	0	/	0	10	/	10	7	/	7	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	0	0	0	0	0	0	5	0	0	4	0	9	
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
	PEAK HR FACTOR	0.000			0.000			0.625			0.500			0.750
	APP/DEPART	0	/	0	0	/	0	5	/	5	4	/	4	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/25/22
WEDNESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Key Pointe
Amargosa

PROJECT #:
LOCATION #:
CONTROL:

SC3470
4
STOP N

CLASS 5:	NOTES:	AM		▲	
RV		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

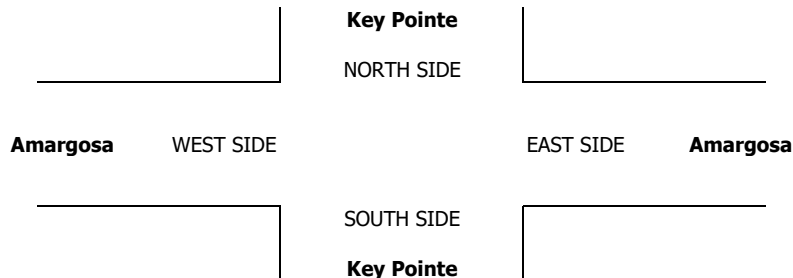
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Amargosa			Amargosa			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	X	1	X	X	X	X	2	0	0	2	X	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/25/22
WEDNESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Key Pointe
Amargosa

PROJECT #:
LOCATION #:
CONTROL:

SC3470
4
STOP N

CLASS 6:	NOTES:	AM		▲	
BUSES		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

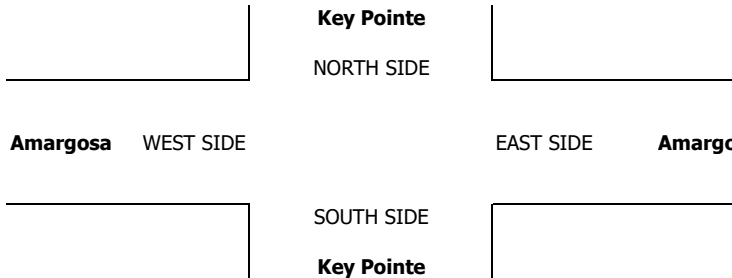
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Amargosa			Amargosa			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	X	1	X	X	X	X	2	0	0	2	X	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1
	7:30 AM	0	0	0	0	0	0	2	0	0	0	0	2
	7:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2
	8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	3	0	0	6	0	9
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	3	/	3	6	/	6
	BEGIN PEAK HR	8:00 AM											
PM	VOLUMES	0	0	0	0	0	0	0	0	0	4	0	4
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.500		
	APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4
	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	2	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	2	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	2	0	0	4	0	6
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	4	/	4
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	4	0	4
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.500		
	APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Tue, May 17, 22

LOCATION: Hesperia
NORTH & SOUTH: Key Pointe
EAST & WEST: Main

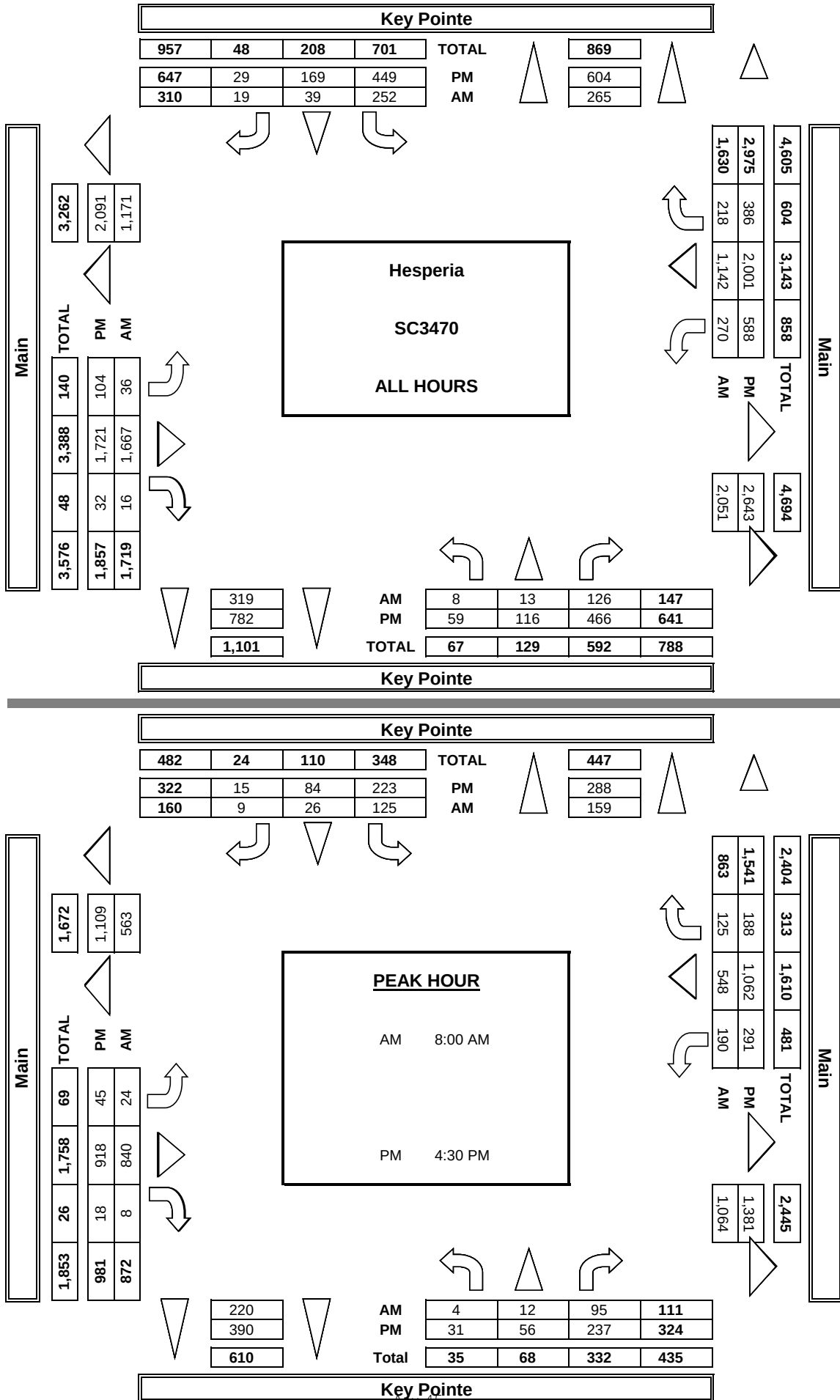
PROJECT #: SC3470
LOCATION #: 5
CONTROL: SIGNAL

NOTES:										AM		▲	
										PM		N	
										MD	◀ W		E ▶
										OTHER		S	
										OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	0.5	0.5	1	3	1	1	3	0	

AM	7:00 AM	1	0	12	23	2	4	4	183	1	10	115	29	384
	7:15 AM	3	0	6	27	4	3	2	221	2	19	151	20	458
	7:30 AM	0	1	4	41	4	2	3	196	0	24	171	21	467
	7:45 AM	0	0	9	36	3	1	3	227	5	27	157	23	491
	8:00 AM	1	4	17	40	4	3	6	230	2	37	114	33	491
	8:15 AM	0	2	22	32	5	2	6	207	2	41	129	30	478
	8:30 AM	2	4	28	30	8	1	6	191	3	46	155	22	496
	8:45 AM	1	2	28	23	9	3	6	212	1	66	150	40	541
	VOLUMES	8	13	126	252	39	19	36	1,667	16	270	1,142	218	3,806
	APPROACH %	5%	9%	86%	81%	13%	6%	2%	97%	1%	17%	70%	13%	
	APP/DEPART	147	/	265	310	/	319	1,719	/	2,051	1,630	/	1,171	0
PM	BEGIN PEAK HR	8:00 AM												
	VOLUMES	4	12	95	125	26	9	24	840	8	190	548	125	2,006
	APPROACH %	4%	11%	86%	78%	16%	6%	3%	96%	1%	22%	63%	14%	
	PEAK HR FACTOR	0.816			0.851			0.916			0.843			0.927
	APP/DEPART	111	/	159	160	/	220	872	/	1,064	863	/	563	0
	4:00 PM	6	16	52	59	19	5	12	193	2	78	268	48	758
	4:15 PM	8	15	58	73	23	3	16	187	4	74	244	49	754
	4:30 PM	7	10	69	52	16	3	9	212	4	79	291	41	793
	4:45 PM	7	14	50	53	29	4	12	223	6	71	265	58	792
	5:00 PM	10	15	69	56	21	4	14	233	2	67	233	44	768
PM	5:15 PM	7	17	49	62	18	4	10	250	6	74	273	45	815
	5:30 PM	6	17	63	46	28	3	17	211	3	67	230	57	748
	5:45 PM	8	12	56	48	15	3	14	212	5	78	197	44	692
	VOLUMES	59	116	466	449	169	29	104	1,721	32	588	2,001	386	6,120
	APPROACH %	9%	18%	73%	69%	26%	4%	6%	93%	2%	20%	67%	13%	
	APP/DEPART	641	/	604	647	/	782	1,857	/	2,643	2,975	/	2,091	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	31	56	237	223	84	15	45	918	18	291	1,062	188	3,168
	APPROACH %	10%	17%	73%	69%	26%	5%	5%	94%	2%	19%	69%	12%	
	PEAK HR FACTOR	0.862			0.936			0.922			0.937			0.972
	APP/DEPART	324	/	288	322	/	390	981	/	1,381	1,541	/	1,109	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Main	PROJECT #: LOCATION #: CONTROL:	SC3470 5 SIGNAL

PCE Adjusted	NOTES:								AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
	Class	1	2	3	4	5	6					
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL

AM	7:00 AM	1	0	12	25	2	6	4	203	1	10	127	34	425
	7:15 AM	3	0	8	32	5	3	3	238	2	19	167	21	500
	7:30 AM	0	1	4	44	4	2	3	208	0	26	190	24	504
	7:45 AM	0	0	9	38	3	1	4	239	5	30	169	29	525
	8:00 AM	1	4	19	46	4	3	7	250	2	39	128	37	538
	8:15 AM	0	2	22	32	5	2	7	233	2	41	145	32	522
	8:30 AM	2	4	29	33	8	1	9	213	3	46	171	24	542
	8:45 AM	1	2	28	26	9	5	8	232	1	68	164	42	584
	VOLUMES	8	13	130	276	40	23	43	1,815	16	277	1,259	240	4,139
	APPROACH %	5%	9%	86%	81%	12%	7%	2%	97%	1%	16%	71%	14%	
	APP/DEPART	151	/	296	339	/	333	1,874	/	2,220	1,776	/	1,290	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	4	12	97	137	26	11	30	927	8	193	607	134	2,185
	APPROACH %	4%	11%	86%	79%	15%	6%	3%	96%	1%	21%	65%	14%	
	PEAK HR FACTOR	0.819			0.818			0.933			0.856			0.936
PM	APP/DEPART	113	/	176	174	/	227	965	/	1,161	933	/	622	0
	4:00 PM	6	16	52	61	19	6	12	205	2	78	284	49	789
	4:15 PM	8	15	59	77	23	3	16	197	4	75	259	52	787
	4:30 PM	7	10	70	54	16	3	9	226	4	80	311	41	830
	4:45 PM	7	15	51	57	29	4	12	238	6	72	271	59	820
	5:00 PM	10	15	72	61	21	4	15	246	2	67	242	49	803
	5:15 PM	7	17	49	65	18	4	10	260	6	75	289	46	846
	5:30 PM	6	17	64	49	28	5	18	228	3	68	246	64	795
	5:45 PM	8	12	57	50	15	3	15	226	5	79	211	45	726
	VOLUMES	59	117	473	473	169	32	107	1,824	32	593	2,112	404	6,393
	APPROACH %	9%	18%	73%	70%	25%	5%	5%	93%	2%	19%	68%	13%	
	APP/DEPART	649	/	628	674	/	794	1,963	/	2,769	3,108	/	2,203	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	31	57	241	237	84	15	46	969	18	294	1,112	195	3,298
	APPROACH %	9%	17%	73%	70%	25%	4%	4%	94%	2%	18%	69%	12%	
	PEAK HR FACTOR	0.848			0.932			0.935			0.927			0.975
	APP/DEPART	329	/	298	336	/	396	1,033	/	1,446	1,601	/	1,158	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Main	PROJECT #: LOCATION #: CONTROL:	SC3470 5 SIGNAL

CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

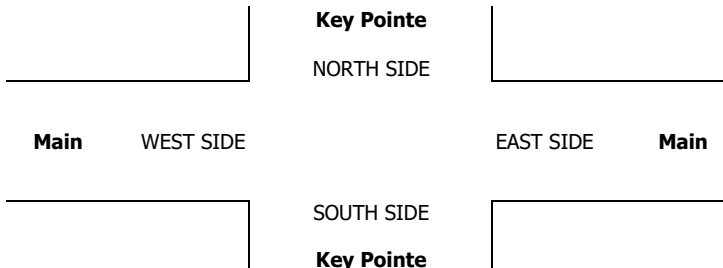
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	1	0	12	22	2	3	4	164	1	10	106	26	351
	7:15 AM	3	0	5	23	2	3	1	202	2	19	131	19	410
	7:30 AM	0	1	4	38	4	2	3	183	0	22	154	19	430
	7:45 AM	0	0	9	34	3	1	2	213	5	25	143	17	452
	8:00 AM	1	4	14	34	4	3	5	210	2	34	95	30	436
	8:15 AM	0	2	22	32	5	2	5	183	2	41	112	28	434
	8:30 AM	2	4	27	27	8	1	4	167	3	46	138	20	447
	8:45 AM	1	2	28	21	9	2	5	192	1	63	132	37	493
	VOLUMES	8	13	121	231	37	17	29	1,514	16	260	1,011	196	3,453
	APPROACH %	6%	9%	85%	81%	13%	6%	2%	97%	1%	18%	69%	13%	
PM	APP/DEPART	142	/	236	285	/	307	1,559	/	1,872	1,467	/	1,038	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	4	12	91	114	26	8	17	752	8	180	477	115	1,810
	APPROACH %	4%	11%	85%	77%	18%	5%	2%	97%	1%	23%	61%	15%	
	PEAK HR FACTOR	0.811			0.902			0.897			0.836			0.918
	APP/DEPART	107	/	144	148	/	214	779	/	961	776	/	491	0
	4:00 PM	6	16	52	57	19	4	12	183	2	78	255	47	731
	4:15 PM	8	15	56	69	23	3	16	175	4	73	227	47	716
	4:30 PM	7	10	68	49	16	3	9	197	4	78	275	41	757
	4:45 PM	7	13	49	51	29	4	12	208	6	69	256	56	760
	5:00 PM	10	15	66	53	21	4	13	216	2	67	226	41	734
	5:15 PM	7	17	49	60	18	4	10	234	6	73	258	44	780
	5:30 PM	6	17	61	44	28	2	15	193	3	66	217	53	705
	5:45 PM	8	12	55	47	15	3	13	200	5	77	187	43	665
	VOLUMES	59	115	456	430	169	27	100	1,606	32	581	1,901	372	5,848
	APPROACH %	9%	18%	72%	69%	27%	4%	6%	92%	2%	20%	67%	13%	
	APP/DEPART	630	/	585	626	/	775	1,738	/	2,499	2,854	/	1,989	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	31	55	232	213	84	15	43	855	18	284	1,015	182	3,031
	APPROACH %	10%	17%	73%	68%	27%	5%	5%	93%	2%	19%	68%	12%	
	PEAK HR FACTOR	0.874			0.929			0.917			0.942			0.971
	APP/DEPART	318	/	280	312	/	386	917	/	1,303	1,484	/	1,062	0

0	0	0	1	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	1	3	4
0	0	2	6	8

0	0	1	3	4
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	1	0	1
0	0	0	2	2
0	0	0	1	1
0	0	0	0	0
0	0	2	7	9



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Main	PROJECT #: LOCATION #: CONTROL:	SC3470 5 SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

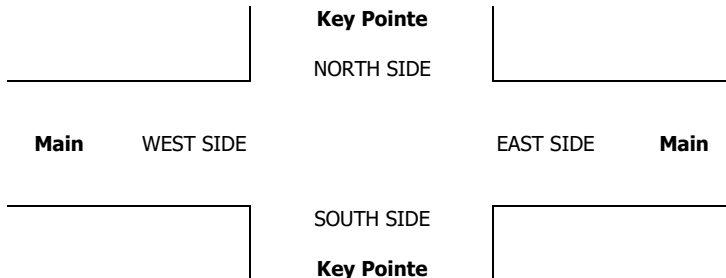
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	10	0	0	4	0	14
	7:15 AM	0	0	0	2	2	0	1	12	0	0	14	1	32
	7:30 AM	0	0	0	0	0	0	0	7	0	1	9	1	18
	7:45 AM	0	0	0	0	0	0	1	10	0	1	11	3	26
	8:00 AM	0	0	3	4	0	0	0	11	0	3	14	1	36
	8:15 AM	0	0	0	0	0	0	1	12	0	0	11	1	25
	8:30 AM	0	0	1	2	0	0	1	14	0	0	9	0	27
	8:45 AM	0	0	0	1	0	0	0	11	0	3	13	3	31
	VOLUMES	0	0	4	9	2	0	4	87	0	8	85	10	209
	APPROACH %	0%	0%	100%	82%	18%	0%	4%	96%	0%	8%	83%	10%	
APP/DEPART	4	/	14	11	/	10	91	/	100	103	/	85	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	0	4	7	0	0	2	48	0	6	47	5	119	
APPROACH %	0%	0%	100%	100%	0%	0%	4%	96%	0%	10%	81%	9%		
PEAK HR FACTOR	0.333			0.438			0.833			0.763			0.826	
APP/DEPART	4	/	7	7	/	6	50	/	59	58	/	47	0	
PM	4:00 PM	0	0	0	1	0	0	0	2	0	0	5	1	9
	4:15 PM	0	0	2	2	0	0	0	9	0	1	10	1	25
	4:30 PM	0	0	1	2	0	0	0	9	0	1	6	0	19
	4:45 PM	0	0	1	0	0	0	0	9	0	2	7	2	21
	5:00 PM	0	0	2	1	0	0	0	13	0	0	2	0	18
	5:15 PM	0	0	0	0	0	0	0	14	0	0	9	0	23
	5:30 PM	0	0	2	1	0	0	2	10	0	1	6	0	22
	5:45 PM	0	0	1	0	0	0	0	6	0	0	2	0	9
	VOLUMES	0	0	9	7	0	0	2	72	0	5	47	4	146
	APPROACH %	0%	0%	100%	100%	0%	0%	3%	97%	0%	9%	84%	7%	
	APP/DEPART	9	/	6	7	/	5	74	/	88	56	/	47	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	4	3	0	0	0	45	0	3	24	2	81
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	10%	83%	7%	
PEAK HR FACTOR	0.500			0.375			0.804			0.659			0.880	
APP/DEPART	4	/	2	3	/	3	45	/	52	29	/	24	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Main	PROJECT #: LOCATION #: CONTROL:	SC3470 5 SIGNAL

CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

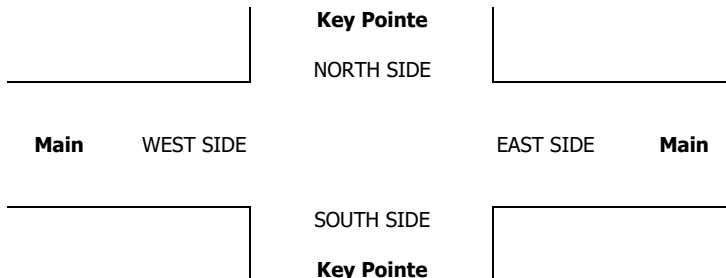
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	2	0	0	0	0	2	
	7:15 AM	0	0	0	0	0	0	2	0	0	2	0	4	
	7:30 AM	0	0	0	1	0	0	2	0	1	2	0	6	
	7:45 AM	0	0	0	1	0	0	1	0	0	0	2	4	
	8:00 AM	0	0	0	0	0	0	3	0	0	2	0	5	
	8:15 AM	0	0	0	0	0	0	2	0	0	2	0	4	
	8:30 AM	0	0	0	0	0	0	2	0	0	4	0	6	
	8:45 AM	0	0	0	0	0	0	2	0	0	2	0	4	
	VOLUMES	0	0	0	2	0	0	16	0	1	14	2	35	
	APPROACH %	0%	0%	0%	100%	0%	0%	100%	0%	6%	82%	12%		
APP/DEPART	0	/	2	2	/	1	16	/	18	17	/	14	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	0	0	0	0	0	0	9	0	0	10	0	19	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.000			0.750			0.625			0.792	
APP/DEPART	0	/	0	0	/	0	9	/	9	10	/	10	0	
PM	4:00 PM	0	0	0	1	0	1	0	3	0	0	1	0	6
	4:15 PM	0	0	0	0	0	0	1	0	0	2	0	3	
	4:30 PM	0	0	0	0	0	0	2	0	0	1	0	3	
	4:45 PM	0	0	0	0	0	0	1	0	0	2	0	3	
	5:00 PM	0	0	0	0	0	0	1	0	0	2	0	3	
	5:15 PM	0	0	0	1	0	0	0	0	0	1	0	2	
	5:30 PM	0	0	0	0	0	0	2	0	0	1	1	4	
	5:45 PM	0	0	0	0	0	0	1	1	0	1	1	5	
	VOLUMES	0	0	0	2	0	1	11	0	1	11	2	29	
	APPROACH %	0%	0%	0%	67%	0%	33%	8%	92%	0%	7%	79%	14%	
	APP/DEPART	0	/	3	3	/	1	12	/	13	14	/	12	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	1	0	0	0	4	0	0	6	0	11
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.250			0.500			0.750			0.917	
APP/DEPART	0	/	0	1	/	0	4	/	5	6	/	6	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Main	PROJECT #: LOCATION #: CONTROL:	SC3470 5 SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

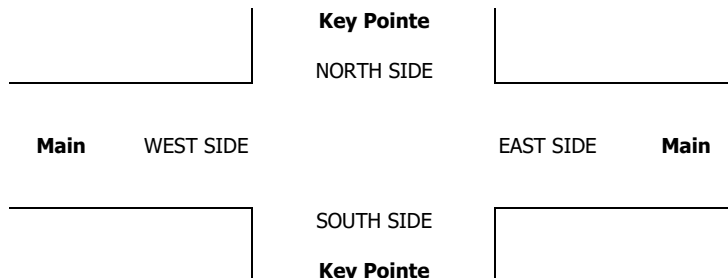
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	1	0	1	0	6	0	0	5	2	15
	7:15 AM	0	0	1	2	0	0	0	4	0	0	3	0	10
	7:30 AM	0	0	0	0	0	0	0	2	0	0	6	1	9
	7:45 AM	0	0	0	0	0	0	0	3	0	1	3	1	8
	8:00 AM	0	0	0	2	0	0	0	5	0	0	2	1	10
	8:15 AM	0	0	0	0	0	0	0	8	0	0	4	0	12
	8:30 AM	0	0	0	1	0	0	1	5	0	0	3	0	10
	8:45 AM	0	0	0	1	0	1	1	5	0	0	2	0	10
	VOLUMES	0	0	1	7	0	2	2	38	0	1	28	5	84
	APPROACH %	0%	0%	100%	78%	0%	22%	5%	95%	0%	3%	82%	15%	
PM	APP/DEPART	1	/	7	9	/	1	40	/	46	34	/	30	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	0	4	0	1	2	23	0	0	11	1	42
	APPROACH %	0%	0%	0%	80%	0%	20%	8%	92%	0%	0%	92%	8%	
	PEAK HR FACTOR	0.000			0.625			0.781			0.750			0.875
	APP/DEPART	0	/	3	5	/	0	25	/	27	12	/	12	0
	4:00 PM	0	0	0	0	0	0	0	3	0	0	5	0	8
	4:15 PM	0	0	0	1	0	0	0	2	0	0	3	1	7
	4:30 PM	0	0	0	0	0	0	0	3	0	0	7	0	10
	4:45 PM	0	0	0	2	0	0	0	4	0	0	0	0	6
	5:00 PM	0	0	1	2	0	0	0	2	0	0	3	2	10
	5:15 PM	0	0	0	1	0	0	0	1	0	0	5	0	7
	5:30 PM	0	0	0	1	0	1	0	4	0	0	6	3	15
	5:45 PM	0	0	0	1	0	0	0	5	0	0	5	0	11
	VOLUMES	0	0	1	8	0	1	0	24	0	0	34	6	74
	APPROACH %	0%	0%	100%	89%	0%	11%	0%	100%	0%	0%	85%	15%	
	APP/DEPART	1	/	6	9	/	0	24	/	33	40	/	35	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	1	5	0	0	0	10	0	0	15	2	33
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	0%	88%	12%	
	PEAK HR FACTOR	0.250			0.625			0.625			0.607			0.825
	APP/DEPART	1	/	2	5	/	0	10	/	16	17	/	15	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia Key Pointe Main	PROJECT #: LOCATION #: CONTROL:	SC3470 5 SIGNAL

CLASS 5:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	▶ E
RV				

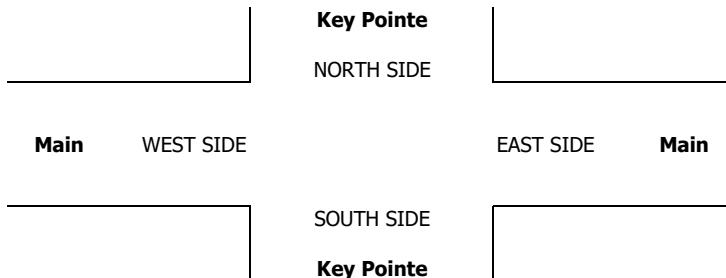
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	0	0	0	0	0	0	2	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	2	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.500			0.250		
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	1	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	1	0	1	0	0	2
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	0	0	0	0	0	0	2	0	1	1	0	4
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%	
	APP/DEPART	0	/	0	0	/	1	2	/	2	2	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	2	0	1	0	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.500			0.250		
	APP/DEPART	0	/	0	0	/	1	2	/	2	1	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/17/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
Key Pointe
Main

PROJECT #:
LOCATION #:
CONTROL:

SC3470
5
SIGNAL

CLASS 6:	NOTES:	AM		▲	
BUSES		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

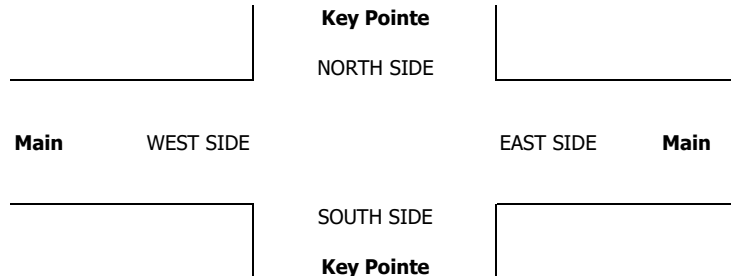
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Key Pointe			Key Pointe			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	0.5	0.5	1	3	1	1	3	0	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	1	0	0	0	1	2
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	2
	7:30 AM	0	0	0	2	0	0	2	0	0	0	0	4
	7:45 AM	0	0	0	1	0	0	0	0	0	0	0	1
	8:00 AM	0	0	0	0	0	0	1	1	0	0	1	3
	8:15 AM	0	0	0	0	0	0	2	0	0	0	1	3
	8:30 AM	0	0	0	0	0	0	2	0	0	1	2	5
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	2
	VOLUMES	0	0	0	3	0	0	10	0	0	3	5	22
	APPROACH %	0%	0%	0%	100%	0%	0%	9%	91%	0%	0%	38%	63%
	APP/DEPART	0	/	6	3	/	0	11	/	13	8	/	3
	BEGIN PEAK HR	8:00 AM											
PM	VOLUMES	0	0	0	0	0	0	1	6	0	0	2	4
	APPROACH %	0%	0%	0%	0%	0%	0%	14%	86%	0%	0%	33%	67%
	PEAK HR FACTOR	0.000			0.000			0.875			0.500		
	APP/DEPART	0	/	5	0	/	0	7	/	6	6	/	2
	4:00 PM	0	0	0	0	0	0	2	0	0	2	0	4
	4:15 PM	0	0	0	1	0	0	0	0	0	2	0	3
	4:30 PM	0	0	0	1	0	0	0	1	0	0	2	4
	4:45 PM	0	1	0	0	0	0	0	1	0	0	0	2
	5:00 PM	0	0	0	0	0	0	1	0	0	0	1	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	1	1
	5:30 PM	0	0	0	0	0	0	0	2	0	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	0	1	0	2	0	0	1	6	0	0	7	2
	APPROACH %	0%	100%	0%	100%	0%	0%	14%	86%	0%	0%	78%	22%
	APP/DEPART	1	/	4	2	/	0	7	/	8	9	/	7
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	1	0	1	0	0	1	2	0	0	2	2
	APPROACH %	0%	100%	0%	100%	0%	0%	33%	67%	0%	0%	50%	50%
	PEAK HR FACTOR	0.250			0.250			0.750			0.500		
	APP/DEPART	1	/	4	1	/	0	3	/	3	4	/	2

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Tue, May 17, 22

LOCATION: Hesperia
NORTH & SOUTH: I-15 SB Ramp
EAST & WEST: Main

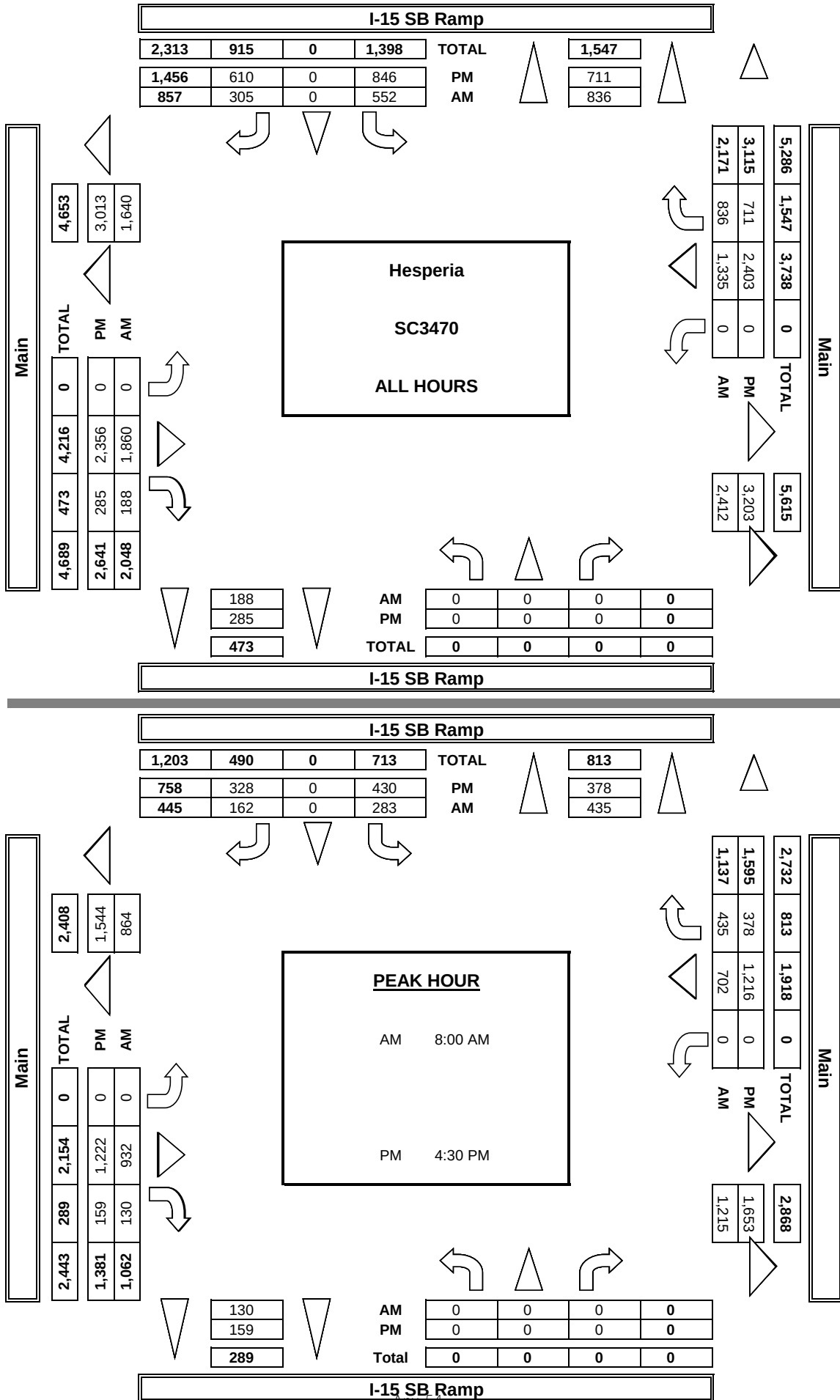
PROJECT #: SC3470
LOCATION #: 2
CONTROL: SIGNAL

NOTES:										AM		▲	
										PM		N	
										MD	◀ W		E ▶
										OTHER		S	
										OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 SB Ramp			I-15 SB Ramp			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	2	X	1	X	3	1	X	3	1	

AM	7:00 AM	0	0	0	59	0	26	0	200	19	0	117	102	523
	7:15 AM	0	0	0	62	0	31	0	238	0	0	155	107	593
	7:30 AM	0	0	0	66	0	36	0	233	16	0	183	105	639
	7:45 AM	0	0	0	82	0	50	0	257	23	0	178	87	677
	8:00 AM	0	0	0	59	0	27	0	241	39	0	144	103	613
	8:15 AM	0	0	0	77	0	46	0	236	30	0	165	118	672
	8:30 AM	0	0	0	66	0	49	0	223	29	0	184	108	659
	8:45 AM	0	0	0	81	0	40	0	232	32	0	209	106	700
	VOLUMES	0	0	0	552	0	305	0	1,860	188	0	1,335	836	5,076
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	91%	9%	0%	61%	39%	
	APP/DEPART	0	/	836	857	/	188	2,048	/	2,412	2,171	/	1,640	0
PM	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	0	283	0	162	0	932	130	0	702	435	2,644
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	88%	12%	0%	62%	38%	
	PEAK HR FACTOR	0.000			0.904			0.948			0.902			0.944
	APP/DEPART	0	/	435	445	/	130	1,062	/	1,215	1,137	/	864	0
	4:00 PM	0	0	0	127	0	67	0	286	21	0	321	93	915
	4:15 PM	0	0	0	101	0	71	0	292	31	0	324	78	897
	4:30 PM	0	0	0	95	0	80	0	302	45	0	323	96	941
	4:45 PM	0	0	0	123	0	88	0	277	32	0	302	93	915
	5:00 PM	0	0	0	102	0	82	0	319	46	0	277	99	925
	5:15 PM	0	0	0	110	0	78	0	324	36	0	314	90	952
	5:30 PM	0	0	0	99	0	83	0	277	41	0	280	92	872
	5:45 PM	0	0	0	89	0	61	0	279	33	0	262	70	794
	VOLUMES	0	0	0	846	0	610	0	2,356	285	0	2,403	711	7,212
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	89%	11%	0%	77%	23%	
	APP/DEPART	0	/	711	1,456	/	285	2,641	/	3,203	3,115	/	3,013	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	430	0	328	0	1,222	159	0	1,216	378	3,734
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	88%	12%	0%	76%	24%	
	PEAK HR FACTOR	0.000			0.898			0.946			0.952			0.981
	APP/DEPART	0	/	378	758	/	159	1,381	/	1,653	1,595	/	1,544	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

PCE Adjusted	NOTES:								AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

	NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

AM	7:00 AM	0	0	0	60	0	28	0	222	23	0	130	114	575
	7:15 AM	0	0	0	65	0	40	0	256	0	0	169	125	655
	7:30 AM	0	0	0	69	0	47	0	247	19	0	194	121	697
	7:45 AM	0	0	0	89	0	55	0	271	24	0	191	103	732
	8:00 AM	0	0	0	66	0	29	0	261	47	0	160	113	675
	8:15 AM	0	0	0	83	0	49	0	257	35	0	176	138	737
	8:30 AM	0	0	0	71	0	54	0	243	34	0	199	126	727
	8:45 AM	0	0	0	91	0	46	0	249	38	0	223	134	779
	VOLUMES	0	0	0	593	0	347	0	2,005	219	0	1,441	972	5,575
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	90%	10%	0%	60%	40%	
	APP/DEPART	0	/	972	939	/	219	2,223	/	2,597	2,413	/	1,787	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	0	310	0	177	0	1,010	153	0	758	511	2,917
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	87%	13%	0%	60%	40%	
	PEAK HR FACTOR	0.000			0.894			0.947			0.889			0.936
PM	APP/DEPART	0	/	511	487	/	153	1,163	/	1,320	1,268	/	934	0
	4:00 PM	0	0	0	132	0	78	0	298	25	0	328	106	964
	4:15 PM	0	0	0	112	0	72	0	302	34	0	341	85	946
	4:30 PM	0	0	0	100	0	85	0	313	49	0	340	108	994
	4:45 PM	0	0	0	127	0	91	0	292	37	0	309	105	960
	5:00 PM	0	0	0	104	0	91	0	329	53	0	280	107	962
	5:15 PM	0	0	0	113	0	84	0	339	39	0	327	99	1,000
	5:30 PM	0	0	0	102	0	98	0	292	45	0	290	95	921
	5:45 PM	0	0	0	94	0	64	0	295	36	0	274	74	837
	VOLUMES	0	0	0	882	0	661	0	2,458	316	0	2,487	778	7,581
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	76%	24%	
	APP/DEPART	0	/	778	1,543	/	316	2,774	/	3,340	3,265	/	3,148	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	443	0	350	0	1,273	177	0	1,255	418	3,915
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	88%	12%	0%	75%	25%	
	PEAK HR FACTOR	0.000			0.911			0.950			0.934			0.979
	APP/DEPART	0	/	418	793	/	177	1,449	/	1,716	1,673	/	1,605	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

CLASS 1:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
PASSENGER VEHICLES			

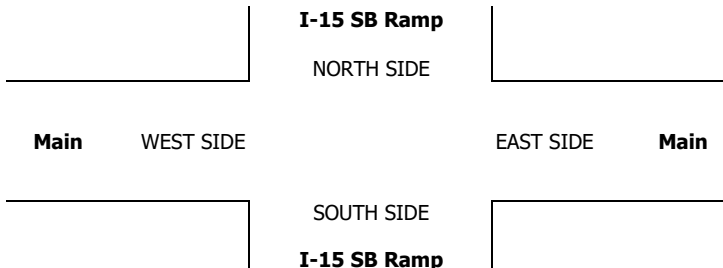
	NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	58	0	25	0	181	15	0	104	89	472
	7:15 AM	0	0	0	59	0	25	0	219	0	0	137	90	530
	7:30 AM	0	0	0	60	0	29	0	219	14	0	173	90	585
	7:45 AM	0	0	0	72	0	43	0	240	22	0	161	74	612
	8:00 AM	0	0	0	50	0	24	0	218	33	0	124	89	538
	8:15 AM	0	0	0	72	0	44	0	216	26	0	151	100	609
	8:30 AM	0	0	0	58	0	44	0	200	25	0	168	90	585
	8:45 AM	0	0	0	72	0	33	0	214	27	0	189	84	619
	VOLUMES	0	0	0	501	0	267	0	1,707	162	0	1,207	706	4,550
	APPROACH %	0%	0%	0%	65%	0%	35%	0%	91%	9%	0%	63%	37%	
PM	APP/DEPART	0	/	706	768	/	162	1,869	/	2,208	1,913	/	1,474	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	0	252	0	145	0	848	111	0	632	363	2,351
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	88%	12%	0%	64%	36%	
	PEAK HR FACTOR	0.000			0.856			0.955			0.911			0.950
	APP/DEPART	0	/	363	397	/	111	959	/	1,100	995	/	777	0
	4:00 PM	0	0	0	122	0	60	0	276	16	0	314	81	869
	4:15 PM	0	0	0	91	0	69	0	280	28	0	305	73	846
	4:30 PM	0	0	0	91	0	77	0	289	41	0	306	84	888
	4:45 PM	0	0	0	120	0	86	0	260	29	0	294	84	873
	5:00 PM	0	0	0	99	0	77	0	307	40	0	273	91	887
	5:15 PM	0	0	0	108	0	73	0	305	32	0	299	78	895
	5:30 PM	0	0	0	95	0	75	0	261	37	0	268	87	823
	5:45 PM	0	0	0	85	0	59	0	266	30	0	253	66	759
	VOLUMES	0	0	0	811	0	576	0	2,244	253	0	2,312	644	6,841
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	90%	10%	0%	78%	22%	
	APP/DEPART	0	/	644	1,387	/	253	2,497	/	3,056	2,957	/	2,888	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	418	0	313	0	1,161	142	0	1,172	337	3,544
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	78%	22%	
	PEAK HR FACTOR	0.000			0.887			0.939			0.968			0.990
	APP/DEPART	0	/	337	731	/	142	1,303	/	1,580	1,510	/	1,485	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

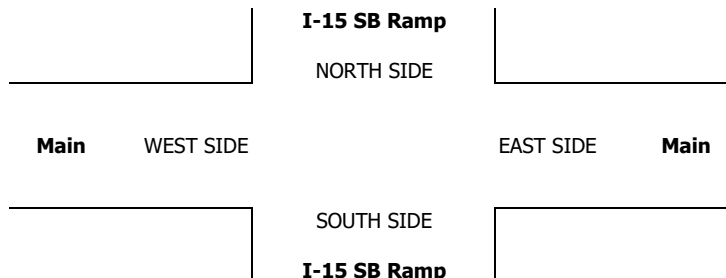
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 SB Ramp			I-15 SB Ramp			Main			Main			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	1	0	0	0	9	3	0	7	9	29
	7:15 AM	0	0	0	2	0	2	0	11	0	0	14	10	39
	7:30 AM	0	0	0	6	0	2	0	6	0	0	4	9	27
	7:45 AM	0	0	0	8	0	6	0	12	0	0	13	7	46
	8:00 AM	0	0	0	4	0	3	0	15	3	0	12	12	49
	8:15 AM	0	0	0	2	0	1	0	10	2	0	10	11	36
	8:30 AM	0	0	0	7	0	2	0	14	2	0	8	12	45
	8:45 AM	0	0	0	5	0	5	0	10	3	0	17	10	50
	VOLUMES	0	0	0	35	0	21	0	87	13	0	85	80	321
	APPROACH %	0%	0%	0%	63%	0%	38%	0%	87%	13%	0%	52%	48%	
PM	APP/DEPART	0	/	80	56	/	13	100	/	122	165	/	106	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	0	0	0	18	0	11	0	49	10	0	47	45	180
	APPROACH %	0%	0%	0%	62%	0%	38%	0%	83%	17%	0%	51%	49%	
	PEAK HR FACTOR	0.000			0.725			0.819			0.852			0.900
	APP/DEPART	0	/	45	29	/	10	59	/	67	92	/	58	0
	4:00 PM	0	0	0	3	0	1	0	3	3	0	3	7	20
	4:15 PM	0	0	0	4	0	2	0	9	2	0	12	2	31
	4:30 PM	0	0	0	2	0	1	0	8	2	0	8	7	28
	4:45 PM	0	0	0	1	0	0	0	12	1	0	5	4	23
	5:00 PM	0	0	0	3	0	1	0	8	3	0	3	5	23
	5:15 PM	0	0	0	0	0	2	0	15	3	0	11	10	41
	5:30 PM	0	0	0	3	0	1	0	9	2	0	8	4	27
	5:45 PM	0	0	0	1	0	0	0	6	2	0	2	2	13
	VOLUMES	0	0	0	17	0	8	0	70	18	0	52	41	206
	APPROACH %	0%	0%	0%	68%	0%	32%	0%	80%	20%	0%	56%	44%	
	APP/DEPART	0	/	41	25	/	18	88	/	87	93	/	60	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	6	0	4	0	43	9	0	27	26	115
	APPROACH %	0%	0%	0%	60%	0%	40%	0%	83%	17%	0%	51%	49%	
	PEAK HR FACTOR	0.000			0.625			0.722			0.631			0.701
	APP/DEPART	0	/	26	10	/	9	52	/	49	53	/	31	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S E ▶ ▼

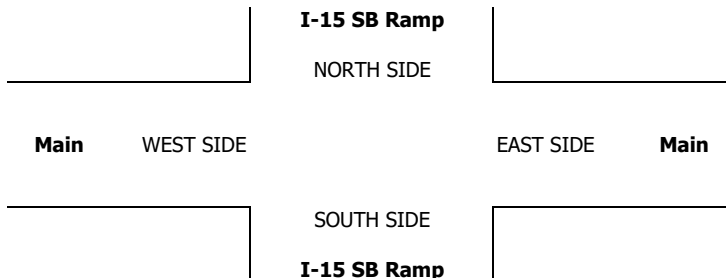
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 SB Ramp			I-15 SB Ramp			Main			Main			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	2	0	0	2	1	5	
	7:15 AM	0	0	0	0	0	0	3	0	0	0	1	4	
	7:30 AM	0	0	0	0	0	0	1	1	0	3	1	6	
	7:45 AM	0	0	0	1	0	0	1	1	0	2	0	5	
	8:00 AM	0	0	0	2	0	0	3	0	0	3	0	8	
	8:15 AM	0	0	0	0	0	0	2	0	0	2	0	4	
	8:30 AM	0	0	0	0	0	2	2	0	0	2	0	6	
	8:45 AM	0	0	0	1	0	1	0	2	0	0	0	1	5
	VOLUMES	0	0	0	4	0	3	0	16	2	0	14	4	43
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	78%	22%	
APP/DEPART	0	/	4	7	/	2	18	/	20	18	/	17	0	
BEGIN PEAK HR	8:00 AM													
VOLUMES	0	0	0	3	0	3	0	9	0	0	7	1	23	
APPROACH %	0%	0%	0%	50%	0%	50%	0%	100%	0%	0%	88%	13%		
PEAK HR FACTOR	0.000			0.750			0.750			0.667			0.719	
APP/DEPART	0	/	1	6	/	0	9	/	12	8	/	10	0	
PM	4:00 PM	0	0	0	1	0	2	0	2	2	0	1	1	9
	4:15 PM	0	0	0	2	0	0	0	0	0	0	1	0	3
	4:30 PM	0	0	0	0	0	0	0	0	1	0	3	2	6
	4:45 PM	0	0	0	0	0	1	0	1	0	0	2	0	4
	5:00 PM	0	0	0	0	0	0	0	1	1	0	0	1	3
	5:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
	5:30 PM	0	0	0	1	0	0	0	2	1	0	2	1	7
	5:45 PM	0	0	0	2	0	0	0	1	0	0	2	1	6
	VOLUMES	0	0	0	7	0	3	0	8	5	0	11	6	40
	APPROACH %	0%	0%	0%	70%	0%	30%	0%	62%	38%	0%	65%	35%	
	APP/DEPART	0	/	6	10	/	5	13	/	15	17	/	14	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	1	0	1	0	3	2	0	5	3	15
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	60%	40%	0%	63%	38%	
PEAK HR FACTOR	0.000			0.500			0.625			0.400			0.625	
APP/DEPART	0	/	3	2	/	2	5	/	4	8	/	6	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

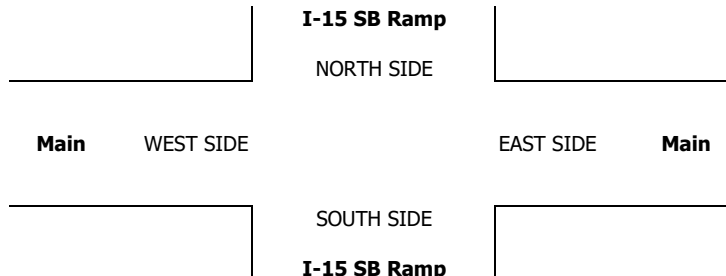
CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
	I-15 SB Ramp			I-15 SB Ramp			Main			Main				NB	SB	EB	WB	TTL
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL					

AM	7:00 AM	0	0	0	0	0	1	0	7	1	0	3	3	15
	7:15 AM	0	0	0	1	0	4	0	4	0	0	3	6	18
	7:30 AM	0	0	0	0	0	5	0	3	1	0	3	5	17
	7:45 AM	0	0	0	1	0	1	0	3	0	0	2	6	13
	8:00 AM	0	0	0	0	0	0	0	4	3	0	2	2	11
	8:15 AM	0	0	0	2	0	1	0	6	2	0	2	7	20
	8:30 AM	0	0	0	0	0	1	0	4	2	0	3	6	16
	8:45 AM	0	0	0	3	0	1	0	4	2	0	2	11	23
	VOLUMES	0	0	0	7	0	14	0	35	11	0	20	46	133
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	76%	24%	0%	30%	70%	
	APP/DEPART	0	/	46	21	/	11	46	/	42	66	/	34	0
PM	BEGIN PEAK HR	8:00 AM			5	0	3	0	18	9	0	9	26	70
	VOLUMES	0	0	0	63%	0%	38%	0	67%	33%	0	26%	74%	
	APPROACH %	0%	0%	0%				0%			0%			
	PEAK HR FACTOR	0.000			0.500			0.844			0.673			0.761
	APP/DEPART	0	/	26	8	/	9	27	/	23	35	/	12	0
	4:00 PM	0	0	0	1	0	4	0	3	0	0	1	4	13
	4:15 PM	0	0	0	3	0	0	0	2	1	0	4	3	13
	4:30 PM	0	0	0	2	0	2	0	2	1	0	4	3	14
	4:45 PM	0	0	0	1	0	1	0	4	2	0	1	5	14
	5:00 PM	0	0	0	0	0	4	0	2	2	0	0	2	10
	5:15 PM	0	0	0	1	0	2	0	3	0	0	3	2	11
	5:30 PM	0	0	0	0	0	7	0	3	1	0	2	0	13
	5:45 PM	0	0	0	1	0	1	0	6	1	0	4	1	14
	VOLUMES	0	0	0	9	0	21	0	25	8	0	19	20	102
	APPROACH %	0%	0%	0%	30%	0%	70%	0%	76%	24%	0%	49%	51%	
	APP/DEPART	0	/	20	30	/	8	33	/	34	39	/	40	0
	BEGIN PEAK HR	4:30 PM			4	0	9	0	11	5	0	8	12	49
	VOLUMES	0	0	0	31%	0%	69%	0	69%	31%	0	40%	60%	
	APPROACH %	0%	0%	0%				0%			0%			
	PEAK HR FACTOR	0.000			0.813			0.667			0.714			0.875
	APP/DEPART	0	/	12	13	/	5	16	/	15	20	/	17	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

CLASS 5:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	▶ E
RV				

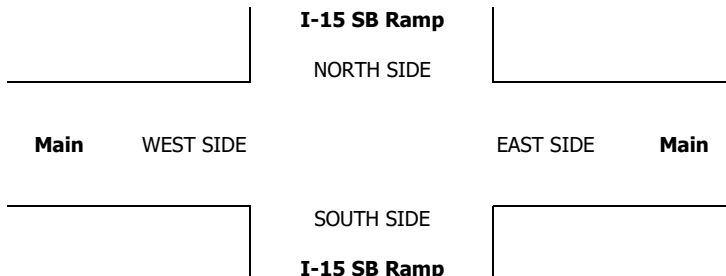
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 SB Ramp			I-15 SB Ramp			Main			Main			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	0	0	0	0	0	0	2	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	0	0	0	2	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.500			0.250		
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	1	0	0	0	0	1
	5:15 PM	0	0	0	0	0	1	0	0	1	0	0	2
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	0	0	0	0	0	1
	VOLUMES	0	0	0	1	0	2	0	1	1	0	0	5
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	50%	50%	0%	0%	
	APP/DEPART	0	/	0	3	/	1	2	/	2	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	1	0	1	1	0	0	3
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%	0%	
	PEAK HR FACTOR	0.000			0.250			0.500			0.000		
	APP/DEPART	0	/	0	1	/	1	2	/	1	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 SB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 2 SIGNAL

CLASS 6:	NOTES:	AM		▲	
BUSES		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

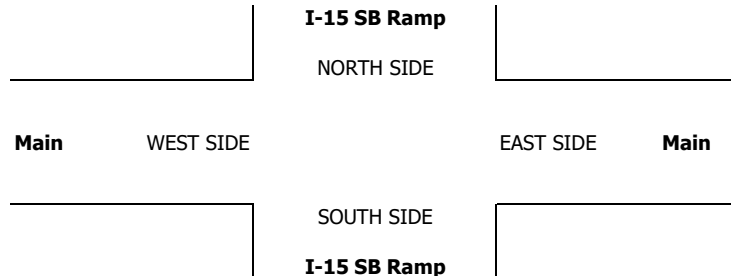
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 SB Ramp			I-15 SB Ramp			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	2	X	1	X	3	1	X	3	1	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	1	0	0	1	0	2
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	2
	7:30 AM	0	0	0	0	0	0	4	0	0	0	0	4
	7:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:00 AM	0	0	0	3	0	0	1	0	0	2	0	6
	8:15 AM	0	0	0	1	0	0	2	0	0	0	0	3
	8:30 AM	0	0	0	1	0	0	2	0	0	3	0	6
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	2
	VOLUMES	0	0	0	5	0	0	13	0	0	8	0	26
	APPROACH %	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	5	/	0	13	/	18	8	/	0
	BEGIN PEAK HR	8:00 AM											
	VOLUMES	0	0	0	5	0	0	0	6	0	0	6	17
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	
	PEAK HR FACTOR	0.000			0.417			0.750			0.500		
	APP/DEPART	0	/	0	5	/	0	6	/	11	6	/	0
	4:00 PM	0	0	0	0	0	0	2	0	0	2	0	4
	4:15 PM	0	0	0	0	0	0	1	0	0	2	0	3
	4:30 PM	0	0	0	0	0	0	3	0	0	2	0	5
	4:45 PM	0	0	0	1	0	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1
	5:30 PM	0	0	0	0	0	0	2	0	0	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	0	0	0	1	0	0	0	8	0	0	9	18
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	
	APP/DEPART	0	/	0	1	/	0	8	/	9	9	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	1	0	0	0	3	0	0	4	8
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	
	PEAK HR FACTOR	0.000			0.250			0.250			0.500		
	APP/DEPART	0	/	0	1	/	0	3	/	4	4	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Tue, May 17, 22

LOCATION: Hesperia
NORTH & SOUTH: I-15 NB Ramp
EAST & WEST: Main

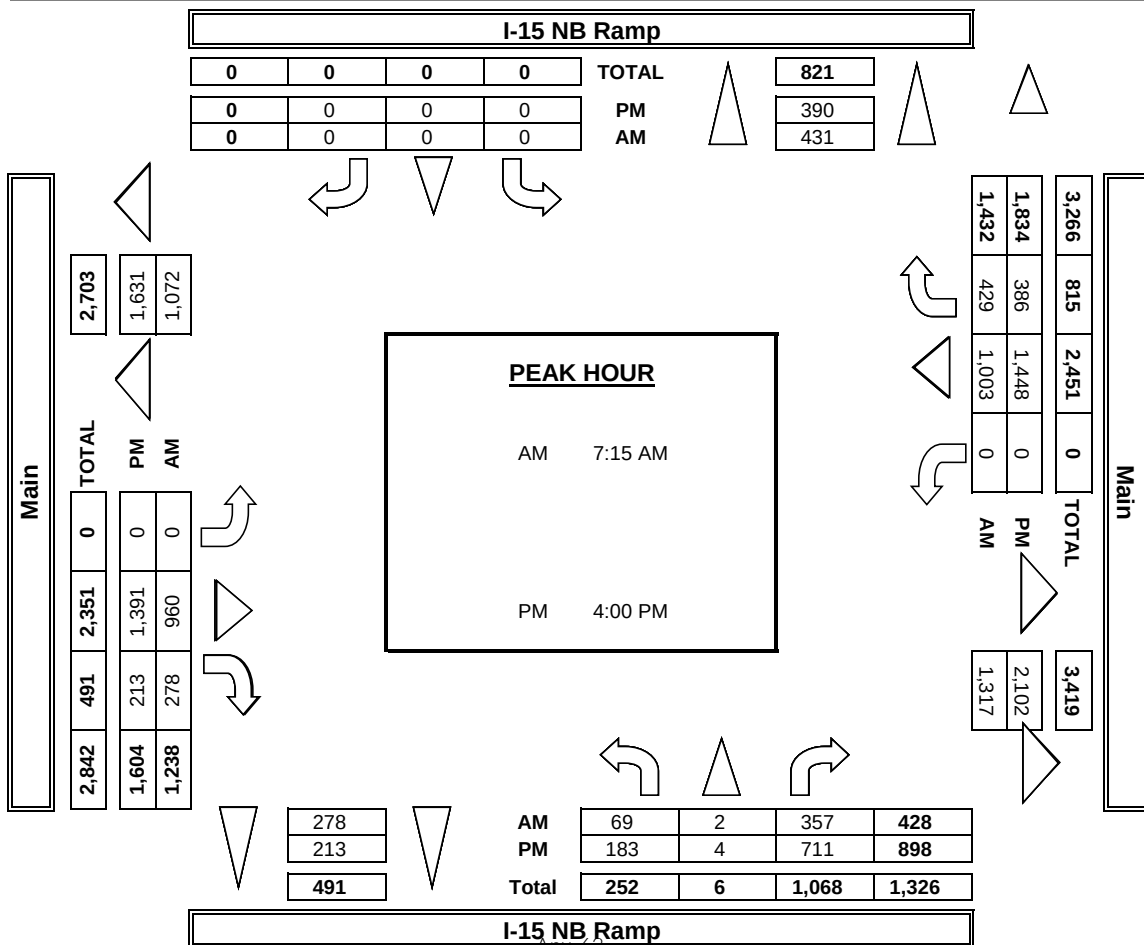
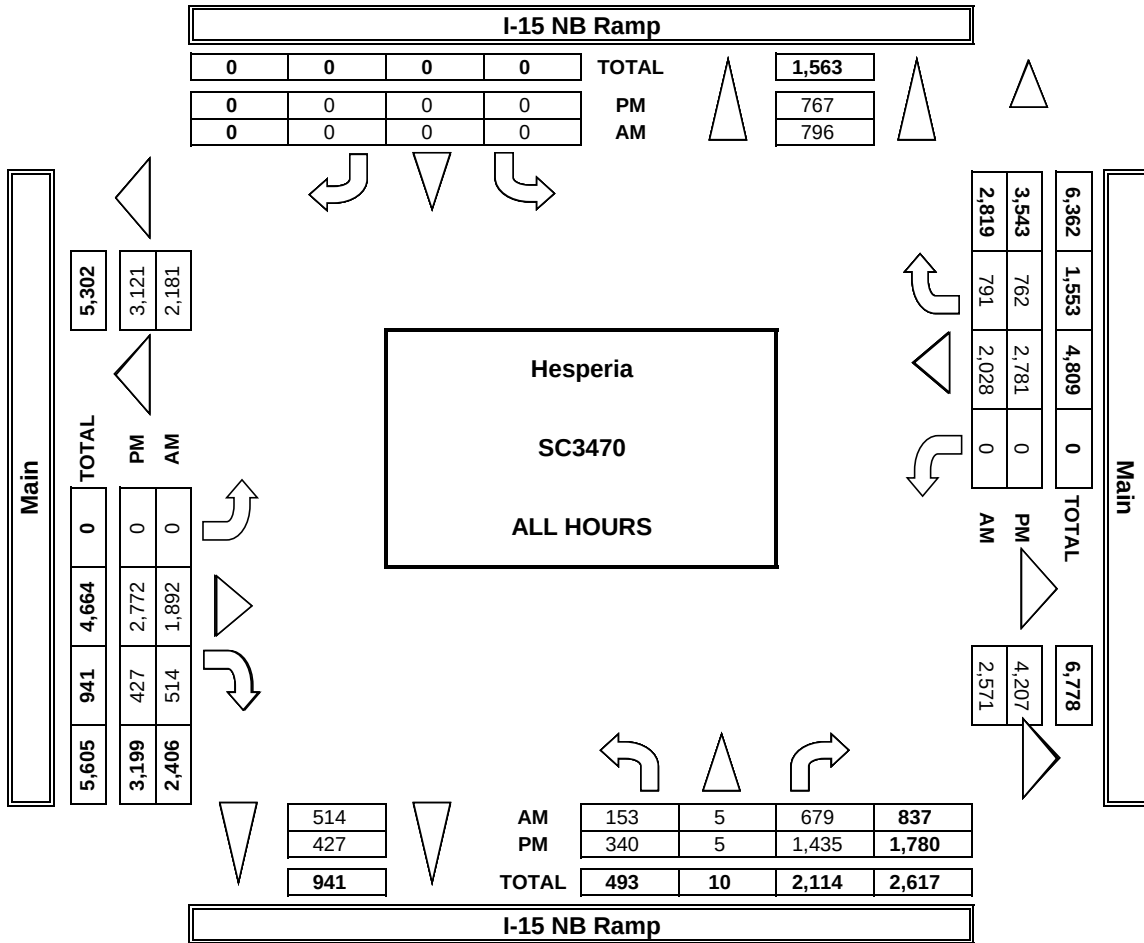
PROJECT #: SC3470
LOCATION #: 3
CONTROL: SIGNAL

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	0.5	1.5	X	X	X	X	3	1	X	3	1	

AM	7:00 AM	24	0	91	0	0	0	0	210	49	0	195	92	661
	7:15 AM	17	1	97	0	0	0	0	221	79	0	245	118	778
	7:30 AM	11	0	103	0	0	0	0	229	70	0	277	112	802
	7:45 AM	20	1	85	0	0	0	0	273	66	0	245	117	807
	8:00 AM	21	0	72	0	0	0	0	237	63	0	236	82	711
	8:15 AM	18	0	79	0	0	0	0	250	57	0	265	79	748
	8:30 AM	18	1	81	0	0	0	0	217	72	0	274	90	753
	8:45 AM	24	2	71	0	0	0	0	255	58	0	291	101	802
	VOLUMES	153	5	679	0	0	0	0	1,892	514	0	2,028	791	6,062
	APPROACH %	18%	1%	81%	0%	0%	0%	0%	79%	21%	0%	72%	28%	
	APP/DEPART	837	/	796	0	/	514	2,406	/	2,571	2,819	/	2,181	0
PM	BEGIN PEAK HR	7:15 AM												
	VOLUMES	69	2	357	0	0	0	0	960	278	0	1,003	429	3,098
	APPROACH %	16%	0%	83%	0%	0%	0%	0%	78%	22%	0%	70%	30%	
	PEAK HR FACTOR	0.930			0.000			0.913			0.920			0.960
	APP/DEPART	428	/	431	0	/	278	1,238	/	1,317	1,432	/	1,072	0
	4:00 PM	49	1	182	0	0	0	0	363	50	0	365	104	1,114
	4:15 PM	48	2	183	0	0	0	0	338	55	0	354	99	1,079
	4:30 PM	45	1	180	0	0	0	0	341	56	0	374	96	1,093
	4:45 PM	41	0	166	0	0	0	0	349	52	0	355	87	1,050
	5:00 PM	36	0	163	0	0	0	0	355	66	0	340	98	1,058
	5:15 PM	32	0	169	0	0	0	0	376	58	0	372	100	1,107
	5:30 PM	51	0	200	0	0	0	0	320	52	0	327	97	1,047
	5:45 PM	38	1	192	0	0	0	0	330	38	0	294	81	974
	VOLUMES	340	5	1,435	0	0	0	0	2,772	427	0	2,781	762	8,522
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	87%	13%	0%	78%	22%	
	APP/DEPART	1,780	/	767	0	/	427	3,199	/	4,207	3,543	/	3,121	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	183	4	711	0	0	0	0	1,391	213	0	1,448	386	4,336
	APPROACH %	20%	0%	79%	0%	0%	0%	0%	87%	13%	0%	79%	21%	
	PEAK HR FACTOR	0.964			0.000			0.971			0.976			0.973
	APP/DEPART	898	/	390	0	/	213	1,604	/	2,102	1,834	/	1,631	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 NB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 3 SIGNAL

PCE Adjusted	NOTES:								AM PM MD OTHER OTHER	◀ W S ▶ E	▲ N ▼
	Class	1	2	3	4	5	6				
	Factor	1	1.5	2	3	2	2				

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

AM	7:00 AM	27	0	106	0	0	0	0	223	59	0	216	99	729
	7:15 AM	21	1	111	0	0	0	0	236	85	0	274	130	856
	7:30 AM	13	0	120	0	0	0	0	241	75	0	302	119	869
	7:45 AM	27	2	96	0	0	0	0	287	73	0	266	127	877
	8:00 AM	21	0	85	0	0	0	0	257	70	0	262	85	779
	8:15 AM	20	0	95	0	0	0	0	267	67	0	294	88	831
	8:30 AM	20	2	98	0	0	0	0	231	83	0	305	97	835
	8:45 AM	25	2	78	0	0	0	0	277	63	0	332	110	885
	VOLUMES	173	6	787	0	0	0	0	2,018	573	0	2,250	854	6,660
	APPROACH %	18%	1%	82%	0%	0%	0%	0%	78%	22%	0%	72%	28%	
	APP/DEPART	965	/	860	0	/	573	2,591	/	2,805	3,104	/	2,423	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	82	3	411	0	0	0	0	1,021	303	0	1,103	460	3,381
	APPROACH %	16%	1%	83%	0%	0%	0%	0%	77%	23%	0%	71%	29%	
	PEAK HR FACTOR	0.930			0.000			0.919			0.930			0.964
PM	APP/DEPART	495	/	463	0	/	303	1,323	/	1,431	1,563	/	1,185	0
	4:00 PM	49	1	205	0	0	0	0	378	51	0	384	111	1,179
	4:15 PM	52	2	198	0	0	0	0	354	60	0	375	102	1,141
	4:30 PM	46	1	192	0	0	0	0	355	59	0	402	98	1,151
	4:45 PM	44	0	178	0	0	0	0	362	58	0	371	93	1,105
	5:00 PM	37	0	175	0	0	0	0	363	70	0	350	104	1,097
	5:15 PM	35	0	195	0	0	0	0	393	59	0	391	103	1,175
	5:30 PM	54	0	224	0	0	0	0	334	56	0	337	102	1,106
	5:45 PM	43	1	201	0	0	0	0	346	43	0	305	83	1,021
	VOLUMES	359	5	1,567	0	0	0	0	2,883	454	0	2,913	795	8,974
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	86%	14%	0%	79%	21%	
	APP/DEPART	1,930	/	800	0	/	454	3,337	/	4,450	3,708	/	3,272	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	190	4	773	0	0	0	0	1,449	227	0	1,531	404	4,576
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	86%	14%	0%	79%	21%	
	PEAK HR FACTOR	0.948			0.000			0.976			0.969			0.970
	APP/DEPART	967	/	408	0	/	227	1,675	/	2,221	1,935	/	1,721	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 NB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 3 SIGNAL

CLASS 1:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
PASSENGER VEHICLES			

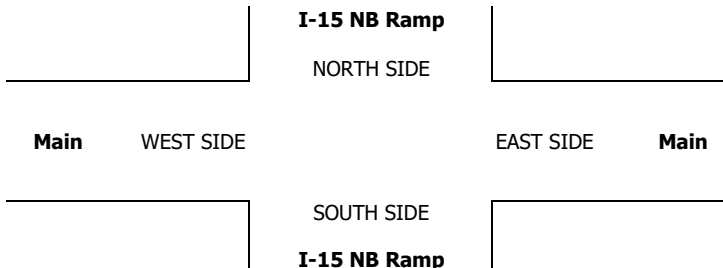
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	18	0	72	0	0	0	0	197	42	0	175	86	590
	7:15 AM	13	1	78	0	0	0	0	207	71	0	214	103	687
	7:30 AM	8	0	86	0	0	0	0	215	64	0	255	106	734
	7:45 AM	12	0	70	0	0	0	0	253	59	0	223	106	723
	8:00 AM	21	0	59	0	0	0	0	211	57	0	202	79	629
	8:15 AM	15	0	62	0	0	0	0	232	50	0	236	70	665
	8:30 AM	17	0	65	0	0	0	0	200	58	0	241	83	664
	8:45 AM	23	2	61	0	0	0	0	233	53	0	250	90	712
	VOLUMES	127	3	553	0	0	0	0	1,748	454	0	1,796	723	5,404
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	79%	21%	0%	71%	29%	
PM	APP/DEPART	683	/	726	0	/	454	2,202	/	2,301	2,519	/	1,923	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	54	1	293	0	0	0	0	886	251	0	894	394	2,773
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	78%	22%	0%	69%	31%	
	PEAK HR FACTOR	0.926			0.000			0.911			0.892			0.944
	APP/DEPART	348	/	395	0	/	251	1,137	/	1,179	1,288	/	948	0
	4:00 PM	49	1	162	0	0	0	0	350	48	0	346	96	1,052
	4:15 PM	44	2	169	0	0	0	0	321	50	0	334	95	1,015
	4:30 PM	44	1	166	0	0	0	0	327	53	0	346	93	1,030
	4:45 PM	39	0	144	0	0	0	0	334	47	0	340	81	985
	5:00 PM	35	0	150	0	0	0	0	344	62	0	329	93	1,013
	5:15 PM	29	0	148	0	0	0	0	356	57	0	348	96	1,034
	5:30 PM	48	0	176	0	0	0	0	304	48	0	313	93	982
	5:45 PM	34	1	177	0	0	0	0	316	35	0	285	78	926
	VOLUMES	322	5	1,292	0	0	0	0	2,652	400	0	2,641	725	8,037
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	87%	13%	0%	78%	22%	
	APP/DEPART	1,619	/	730	0	/	400	3,052	/	3,944	3,366	/	2,963	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	176	4	641	0	0	0	0	1,332	198	0	1,366	365	4,082
	APPROACH %	21%	0%	78%	0%	0%	0%	0%	87%	13%	0%	79%	21%	
	PEAK HR FACTOR	0.955			0.000			0.961			0.979			0.970
	APP/DEPART	821	/	369	0	/	198	1,530	/	1,973	1,731	/	1,542	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 NB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 3 SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

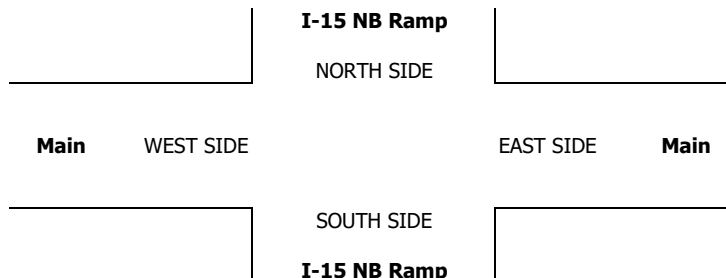
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	6	0	15	0	0	0	0	7	3	0	10	2	43
	7:15 AM	3	0	15	0	0	0	0	7	6	0	21	12	64
	7:30 AM	2	0	10	0	0	0	0	8	4	0	11	3	38
	7:45 AM	6	1	13	0	0	0	0	16	4	0	14	7	61
	8:00 AM	0	0	9	0	0	0	0	16	3	0	24	2	54
	8:15 AM	3	0	12	0	0	0	0	10	2	0	18	6	51
	8:30 AM	0	1	10	0	0	0	0	10	11	0	20	4	56
	8:45 AM	1	0	9	0	0	0	0	12	3	0	26	7	58
	VOLUMES	21	2	93	0	0	0	0	86	36	0	144	43	425
	APPROACH %	18%	2%	80%	0%	0%	0%	0%	70%	30%	0%	77%	23%	
PM	APP/DEPART	116	/	45	0	/	36	122	/	179	187	/	165	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	11	1	47	0	0	0	0	47	17	0	70	24	217
	APPROACH %	19%	2%	80%	0%	0%	0%	0%	73%	27%	0%	74%	26%	
	PEAK HR FACTOR	0.738			0.000			0.800			0.712			0.848
	APP/DEPART	59	/	25	0	/	17	64	/	94	94	/	81	0
	4:00 PM	0	0	10	0	0	0	0	4	2	0	10	6	32
	4:15 PM	3	0	7	0	0	0	0	10	3	0	11	2	36
	4:30 PM	0	0	10	0	0	0	0	9	1	0	15	3	38
	4:45 PM	1	0	20	0	0	0	0	10	3	0	8	4	46
	5:00 PM	1	0	9	0	0	0	0	9	2	0	7	2	30
	5:15 PM	2	0	10	0	0	0	0	14	1	0	19	3	49
	5:30 PM	2	0	15	0	0	0	0	9	3	0	10	2	41
	5:45 PM	2	0	14	0	0	0	0	7	0	0	2	3	28
	VOLUMES	11	0	95	0	0	0	0	72	15	0	82	25	300
	APPROACH %	10%	0%	90%	0%	0%	0%	0%	83%	17%	0%	77%	23%	
	APP/DEPART	106	/	25	0	/	15	87	/	167	107	/	93	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	4	0	47	0	0	0	0	33	9	0	44	15	152
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	79%	21%	0%	75%	25%	
	PEAK HR FACTOR	0.607			0.000			0.808			0.819			0.826
	APP/DEPART	51	/	15	0	/	9	42	/	80	59	/	48	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 NB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 3 SIGNAL

CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

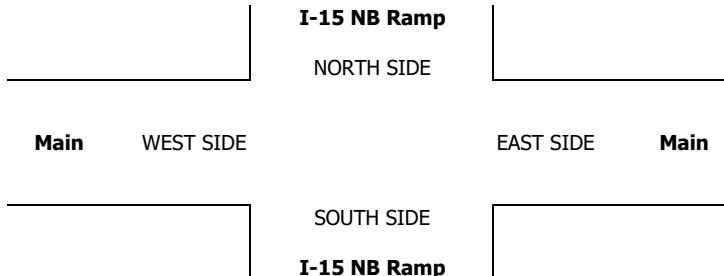
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	1	0	0	0	0	2	0	0	3	2	8
	7:15 AM	0	0	2	0	0	0	0	2	1	0	1	0	6
	7:30 AM	1	0	2	0	0	0	0	0	1	0	3	1	8
	7:45 AM	0	0	0	0	0	0	0	1	1	0	2	1	5
	8:00 AM	0	0	0	0	0	0	0	4	1	0	3	0	8
	8:15 AM	0	0	0	0	0	0	0	1	1	0	2	0	4
	8:30 AM	0	0	0	0	0	0	0	2	0	0	2	1	5
	8:45 AM	0	0	0	0	0	0	0	2	1	0	1	0	4
	VOLUMES	1	0	5	0	0	0	0	14	6	0	17	5	48
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	70%	30%	0%	77%	23%	
PM	APP/DEPART	6	/	5	0	/	6	20	/	19	22	/	18	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	1	0	4	0	0	0	0	7	4	0	9	2	27
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	64%	36%	0%	82%	18%	
	PEAK HR FACTOR	0.417			0.000			0.550			0.688			0.844
	APP/DEPART	5	/	2	0	/	4	11	/	11	11	/	10	0
	4:00 PM	0	0	2	0	0	0	0	3	0	0	2	0	7
	4:15 PM	0	0	3	0	0	0	0	2	0	0	1	0	6
	4:30 PM	0	0	1	0	0	0	0	0	0	0	5	0	6
	4:45 PM	0	0	1	0	0	0	0	1	0	0	2	0	4
	5:00 PM	0	0	1	0	0	0	0	1	0	0	1	0	3
	5:15 PM	0	0	1	0	0	0	0	2	0	0	0	1	4
	5:30 PM	0	0	2	0	0	0	0	3	0	0	3	0	8
	5:45 PM	0	0	0	0	0	0	0	2	1	0	3	0	6
	VOLUMES	0	0	11	0	0	0	0	14	1	0	17	1	44
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	93%	7%	0%	94%	6%	
	APP/DEPART	11	/	1	0	/	1	15	/	25	18	/	17	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	0	0	7	0	0	0	0	6	0	0	10	0	23
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.583			0.000			0.500			0.500			0.821
	APP/DEPART	7	/	0	0	/	0	6	/	13	10	/	10	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 NB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 3 SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼

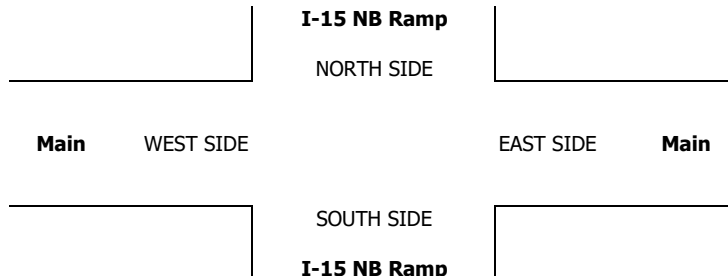
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	3	0	0	0	0	3	4	0	6	2	18
	7:15 AM	1	0	2	0	0	0	0	4	1	0	8	3	19
	7:30 AM	0	0	5	0	0	0	0	2	1	0	8	2	18
	7:45 AM	2	0	2	0	0	0	0	2	2	0	6	2	16
	8:00 AM	0	0	4	0	0	0	0	2	2	0	4	1	13
	8:15 AM	0	0	5	0	0	0	0	4	4	0	9	3	25
	8:30 AM	1	0	6	0	0	0	0	2	2	0	8	2	21
	8:45 AM	0	0	1	0	0	0	0	6	1	0	13	1	22
	VOLUMES	4	0	28	0	0	0	0	25	17	0	62	16	152
	APPROACH %	13%	0%	88%	0%	0%	0%	0%	60%	40%	0%	79%	21%	
PM	APP/DEPART	32	/	16	0	/	17	42	/	53	78	/	66	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	3	0	13	0	0	0	0	10	6	0	26	8	66
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	63%	38%	0%	76%	24%	
	PEAK HR FACTOR	0.800			0.000			0.800			0.773			0.868
	APP/DEPART	16	/	8	0	/	6	16	/	23	34	/	29	0
	4:00 PM	0	0	8	0	0	0	0	4	0	0	5	2	19
	4:15 PM	1	0	4	0	0	0	0	4	1	0	6	0	16
	4:30 PM	0	0	3	0	0	0	0	4	0	0	7	0	14
	4:45 PM	1	0	0	0	0	0	0	3	2	0	5	2	13
	5:00 PM	0	0	3	0	0	0	0	1	1	0	2	2	9
	5:15 PM	1	0	10	0	0	0	0	4	0	0	4	0	19
	5:30 PM	1	0	7	0	0	0	0	2	1	0	1	2	14
	5:45 PM	2	0	1	0	0	0	0	5	2	0	3	0	13
	VOLUMES	6	0	36	0	0	0	0	27	7	0	33	8	117
	APPROACH %	14%	0%	86%	0%	0%	0%	0%	79%	21%	0%	80%	20%	
	APP/DEPART	42	/	8	0	/	7	34	/	63	41	/	39	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	2	0	15	0	0	0	0	15	3	0	23	4	62
	APPROACH %	12%	0%	88%	0%	0%	0%	0%	83%	17%	0%	85%	15%	
	PEAK HR FACTOR	0.531			0.000			0.900			0.964			0.816
	APP/DEPART	17	/	4	0	/	3	18	/	30	27	/	25	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/17/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Hesperia I-15 NB Ramp Main	PROJECT #: LOCATION #: CONTROL:	SC3470 3 SIGNAL

CLASS 5:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	▶ E
RV				

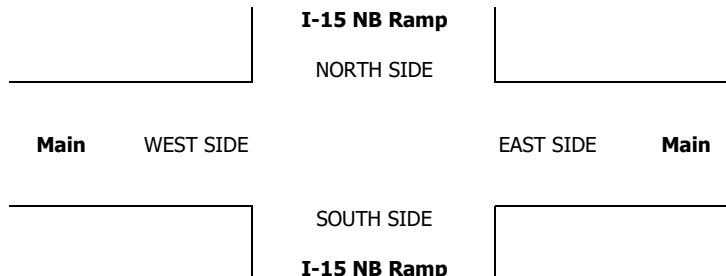
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	0.5	1.5	X	X	X	X	3	1	X	3	1	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1
	8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	0	0	0	0	0	0	2	0	0	1	1	4
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%	
PM	APP/DEPART	0	/	1	0	/	0	2	/	2	/	1	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	1	1	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.500		
	APP/DEPART	0	/	1	0	/	0	0	/	0	2	/	1
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	1	0	0	0	1	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	1	1	0	0	1	3
	APPROACH %	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	100%	
	APP/DEPART	0	/	1	0	/	1	2	/	1	1	/	0
	BEGIN PEAK HR	4:00 PM											
	VOLUMES	0	0	0	0	0	0	1	0	0	0	1	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.250		
	APP/DEPART	0	/	1	0	/	0	1	/	1	1	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/17/22
TUESDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Hesperia
I-15 NB Ramp
Main

PROJECT #:
LOCATION #:
CONTROL:

SC3470
3
SIGNAL

CLASS 6:	NOTES:	AM		▲	
BUSES		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

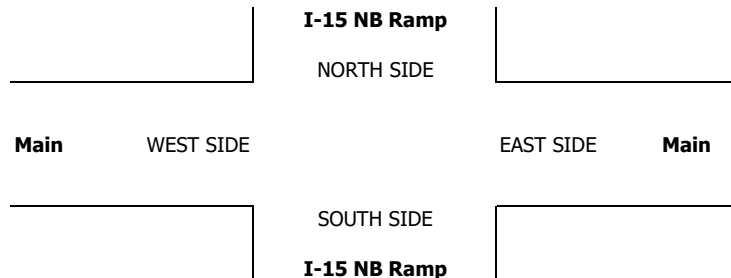
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-15 NB Ramp			I-15 NB Ramp			Main			Main			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	0.5	1.5	X	X	X	X	3	1	X	3	1	

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	1	0	0	1	0	2	
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	2	
	7:30 AM	0	0	0	0	0	0	4	0	0	0	0	4	
	7:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	
	8:00 AM	0	0	0	0	0	0	4	0	0	2	0	6	
	8:15 AM	0	0	0	0	0	0	3	0	0	0	0	3	
	8:30 AM	0	0	0	0	0	0	2	1	0	3	0	6	
	8:45 AM	0	0	0	0	0	0	1	0	0	1	3	5	
	VOLUMES	0	0	0	0	0	0	17	1	0	8	3	29	
	APPROACH %	0%	0%	0%	0%	0%	0%	94%	6%	0%	73%	27%		
APP/DEPART	0	/	3	0	/	1	18	/	17	11	/	8	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	0	0	0	10	0	0	3	0	13		
APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%			
PEAK HR FACTOR	0.000			0.000			0.625			0.375			0.542	
APP/DEPART	0	/	0	0	/	0	10	/	10	3	/	3	0	
PM	4:00 PM	0	0	0	0	0	0	2	0	0	2	0	4	
	4:15 PM	0	0	0	0	0	0	0	1	0	2	1	4	
	4:30 PM	1	0	0	0	0	0	1	2	0	1	0	5	
	4:45 PM	0	0	1	0	0	0	1	0	0	0	0	2	
	5:00 PM	0	0	0	0	0	0	0	0	0	1	1	2	
	5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	
	5:30 PM	0	0	0	0	0	0	2	0	0	0	0	2	
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	
	VOLUMES	1	0	1	0	0	0	6	3	0	8	2	21	
	APPROACH %	50%	0%	50%	0%	0%	0%	67%	33%	0%	80%	20%		
	APP/DEPART	2	/	2	0	/	3	9	/	7	10	/	9	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	1	0	1	0	0	0	4	3	0	5	1	15	
	APPROACH %	50%	0%	50%	0%	0%	0%	57%	43%	0%	83%	17%		
PEAK HR FACTOR	0.500			0.000			0.583			0.500			0.750	
APP/DEPART	2	/	1	0	/	3	7	/	5	6	/	6	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



APPENDIX D

TRIP GENERATION COMPARISON ANALYSIS



November 28, 2022

Mr. Ramin Namvar
RACHAMIN 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

RE: Amargosa and Palmeto High-Cube Warehouse Trip Generation Comparison Analysis
Project No.: 19522

Dear Mr. Namvar:

Ganddini Group, Inc. is pleased to provide this Trip Generation Comparison Analysis for the proposed Amargosa and Palmeto High-Cube Warehouse Project. The purpose of this trip generation comparison analysis is to evaluate the change in trip generation that can be expected between the proposed project and an alternative land use consisting of commercial retail. This Trip Generation Comparison Analysis supplements the Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis (Ganddini Group, Inc., August 18, 2022). We trust the findings of this analysis will aid you and the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The project site is currently undeveloped. Figure 1 illustrates the project location map.

The 30.52-acre project site is proposed to include a 499,850 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE *Trip Generation Manual* and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD).

As shown in Table 1, the proposed project is forecast to generate approximately 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

ALTERNATIVE LAND USE TRIP GENERATION

Table 2 shows the alternative land use (commercial retail) trip generation based on regression equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use.

It should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 2 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative land use trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021) since Amargosa Road adjacent to the project site is a low volume roadway and pass-by trips would be minimal.

As shown in Table 2, the alternative land use is forecast to generate a total of approximately 18,915 daily trips, including 429 trips during the AM peak hour and 1,798 trips during the PM peak hour without a pass-by trips reduction.

TRIP GENERATION COMPARISON

Table 3 shows the difference in project trip generation between the proposed project and the alternative land use. As shown in Table 3, the proposed project is forecast to generate approximately 17,832 fewer daily trips compared to a shopping center land use of equivalent size, including 339 fewer trips during the AM peak hour and 1,717 fewer trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 6 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns were developed using engineering judgment in consultation with City of Hesperia staff and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

ALTERNATIVE LAND USE TRIP DISTRIBUTION

Figure 7 shows the forecast directional distribution patterns for the alternative land use generated trips. The alternative land use trip distribution patterns were developed using engineering judgment and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

PROJECT TRIP ASSIGNMENT

Project AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 8 and Figure 9, respectively.

ALTERNATIVE LAND USE TRIP ASSIGNMENT

Alternative Land Use AM and PM peak hour intersection turning movement volumes expected from the alternative land use are depicted on Figure 10 and Figure 11, respectively.

Mr. Ramin Namvar
RACHAMIN 5, LLC
November 28, 2022

DIFFERENCE IN TRIP ASSIGNMENT

The additional AM and PM peak hour intersection turning movement volumes expected from the alternative land use versus the proposed project are depicted on Figure 12 and Figure 13, respectively.

As shown on these figures, the alternative land use as commercial retail is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed project for all turning movements at each study area intersection where peak hour trips are expected to be added.

CONCLUSION

Based on the trip generation comparison analysis, the proposed project consisting of a 499,850 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer trips (up to 94% fewer daily trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

The alternative land use as commercial retail is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed project for all turning movements at each study area intersection where peak hour trips are expected to be added.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal



Table 1
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)

Size: 499.850 TSF

TRIP GENERATION RATES PER TSF ¹								
Vehicle Type	Source ²	AM Peak Hour			PM Peak Hour			Daily Rate
		In	Out	Rate	In	Out	Rate	
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
Vehicle Type	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	57	17	74	30	47	77	905

PCE ³ TRIPS GENERATED								
Vehicle Type	PCE Factor ⁴	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		65	25	90	32	49	81	1,083

Notes:

(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 2
Alternative Land Use Trip Generation

Trip Generation Rates									
Land Use	Source ¹	Units ²	AM Peak Hour			PM Peak Hour			Daily Equation
			% In	% Out	Equation	% In	% Out	Equation	
Shopping Center (>150k)	ITE 820	TSF	62%	38%	$T=0.59(X) + 133.55$	48%	52%	$LN(T) = 0.72Ln(X) + 3.02$	$T = 26.11(X) + 5863.73$

Trips Generated									
Land Use	Quantity	Units ³	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Shopping Center (>150k)	499,850	TSF	266	163	429	863	935	1,798	18,915

Notes:

(1) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.

(2) TSF = Thousand Square Feet

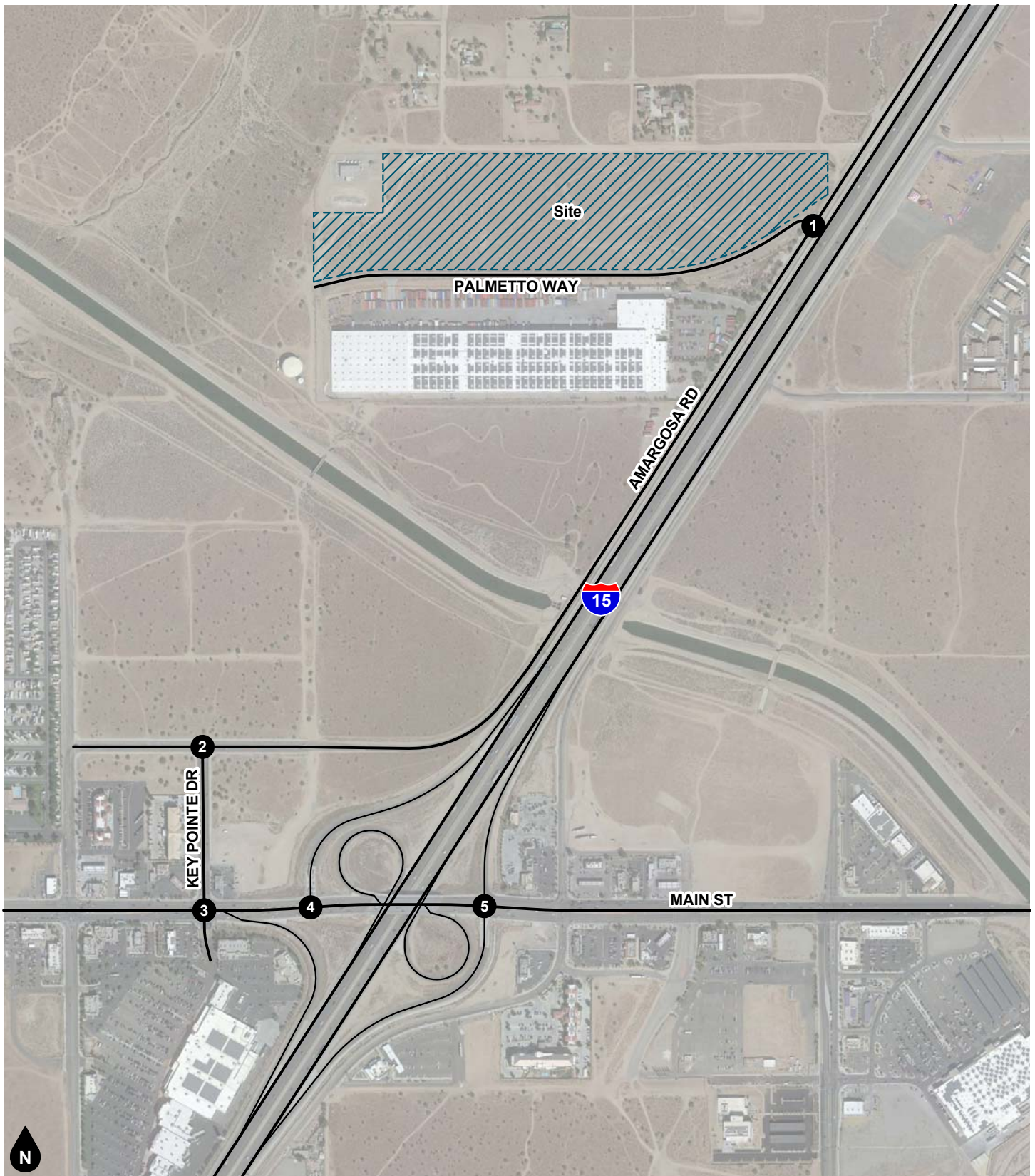
Table 3
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Project ¹	65	25	90	32	49	81	1,083
Alternative Land Use ²	266	163	429	863	935	1,798	18,915
Difference	-201	-138	-339	-831	-886	-1,717	-17,832
	-76%	-85%	-79%	-96%	-95%	-95%	-94%

Notes:

(1) See Table 1.

(2) See Table 2.



Legend

- # Study Intersection

Figure 1
Project Location Map

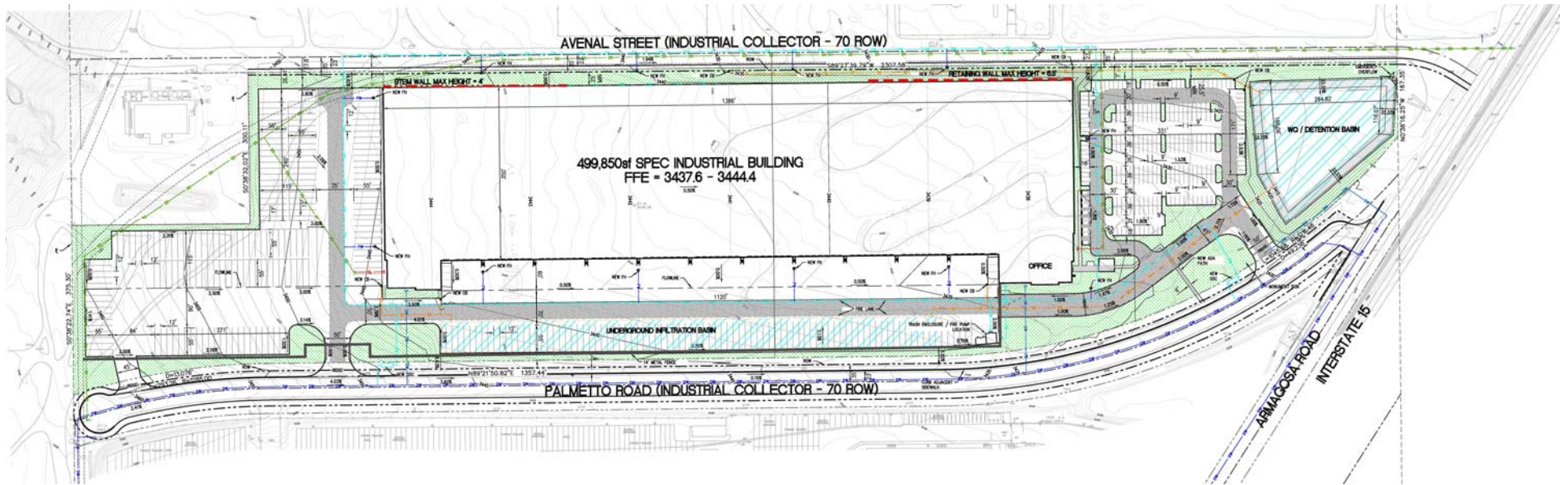


Figure 2
Site Plan

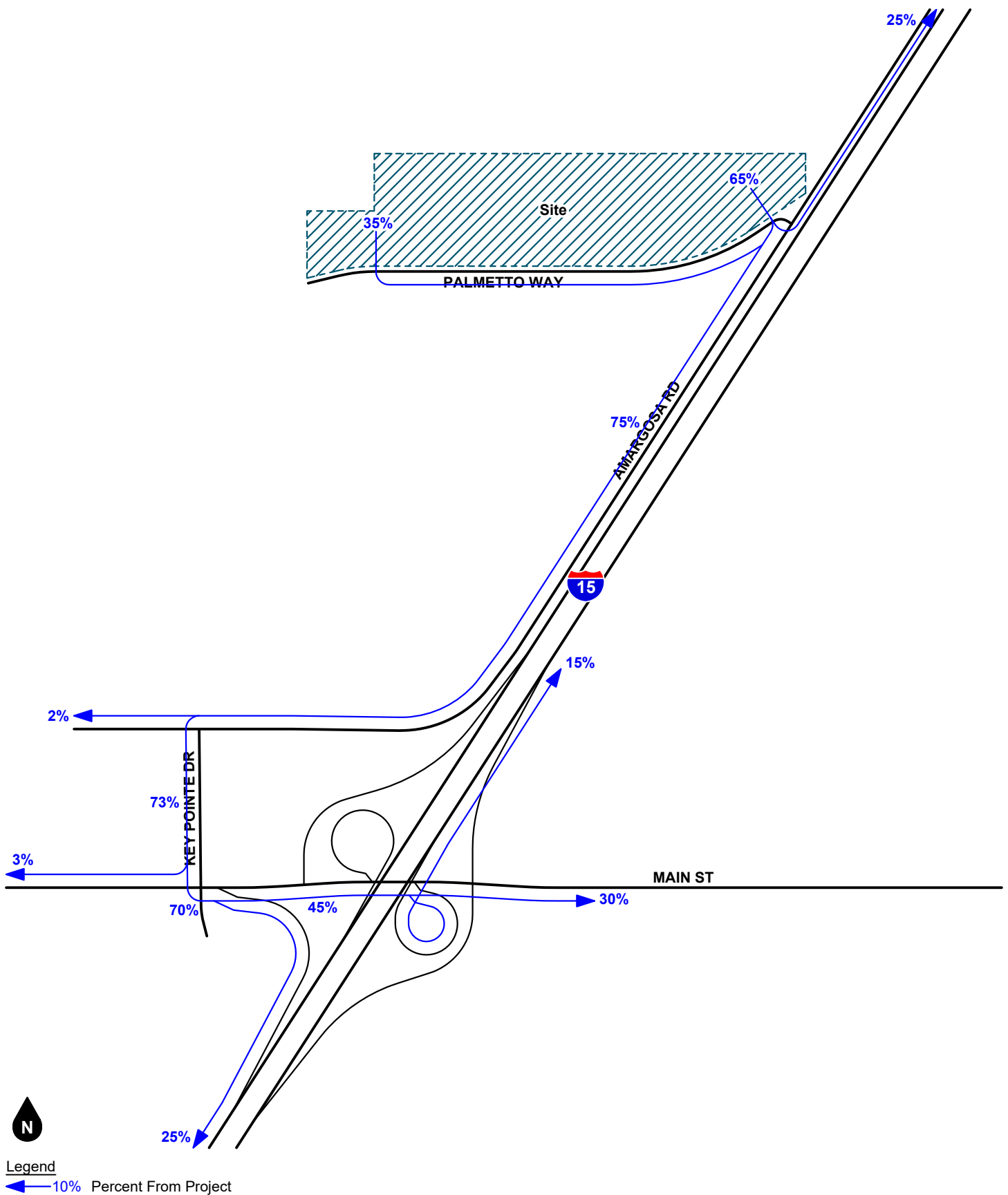


Figure 3
Project Outbound Trip Distribution - Cars

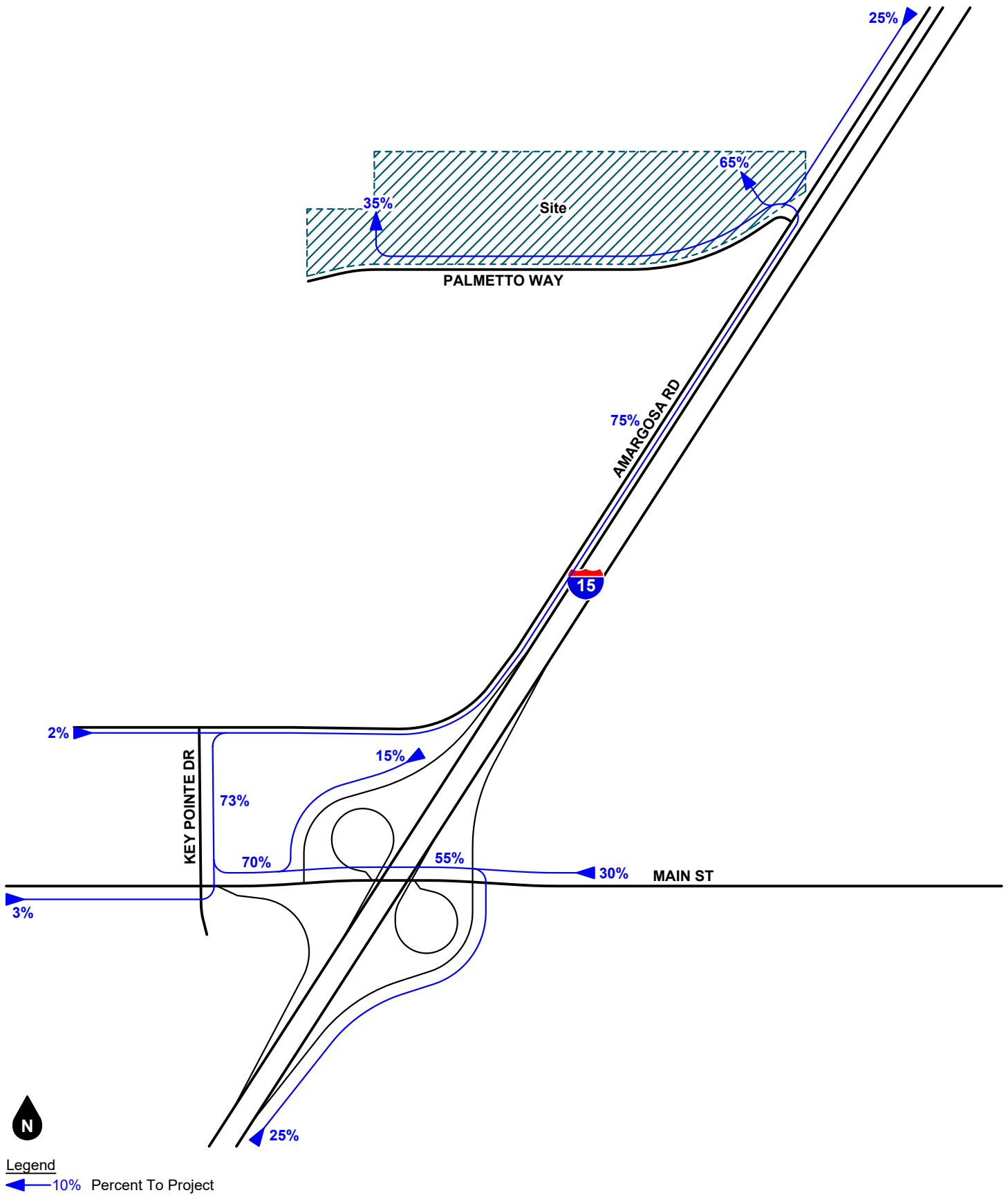


Figure 4
Project Inbound Trip Distribution - Cars

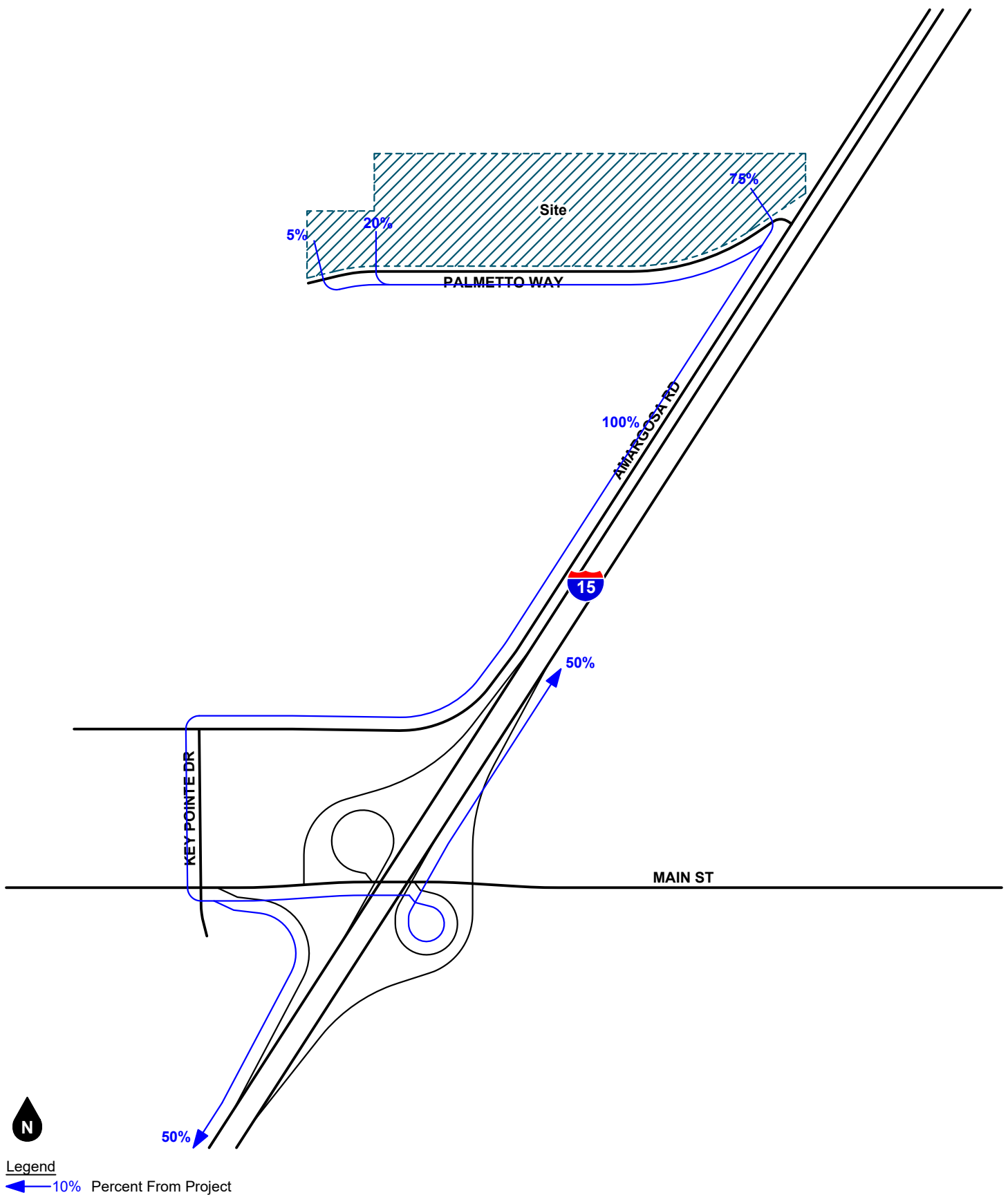


Figure 5
Project Outbound Trip Distribution - Trucks

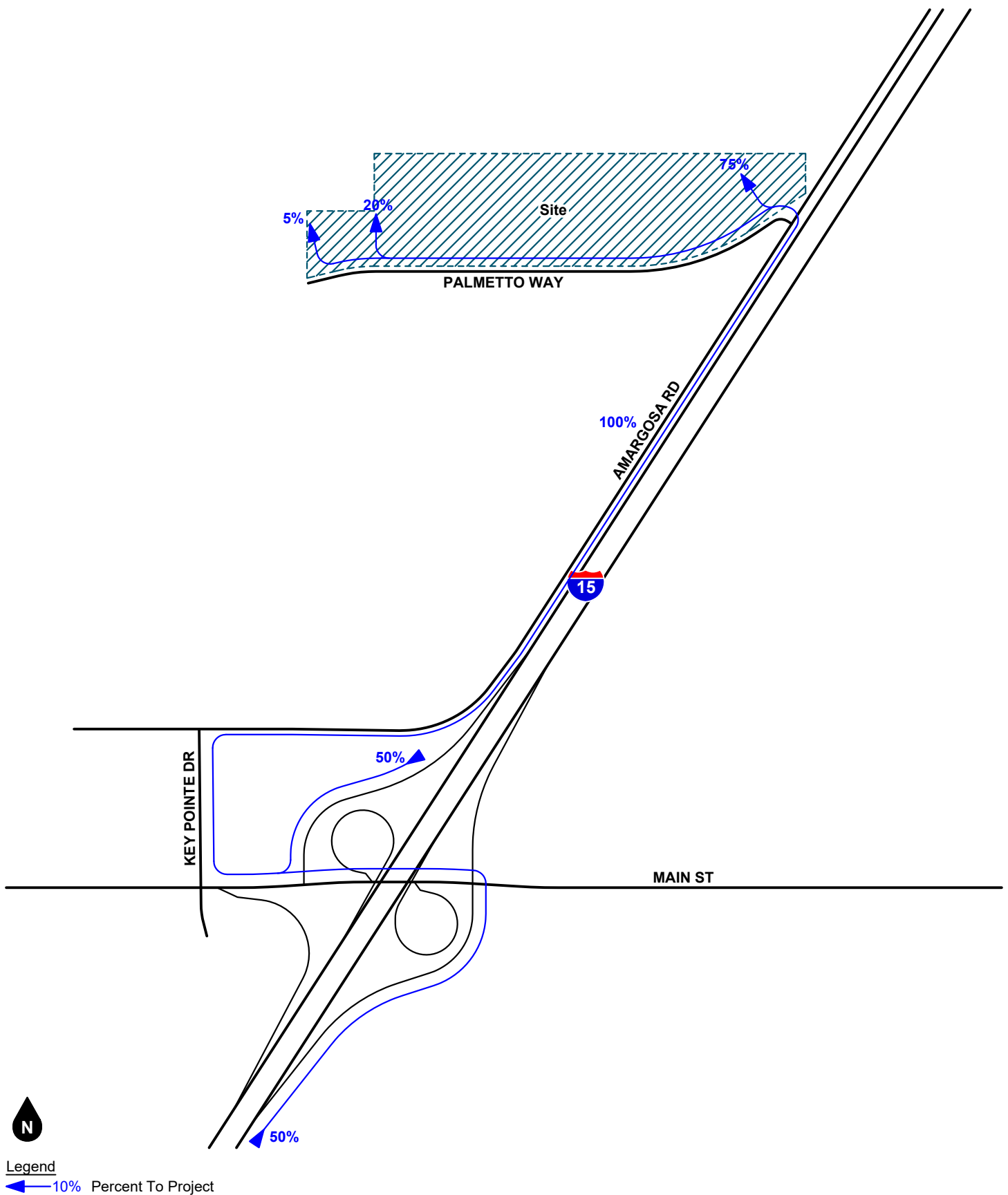


Figure 6
Project Inbound Trip Distribution - Trucks

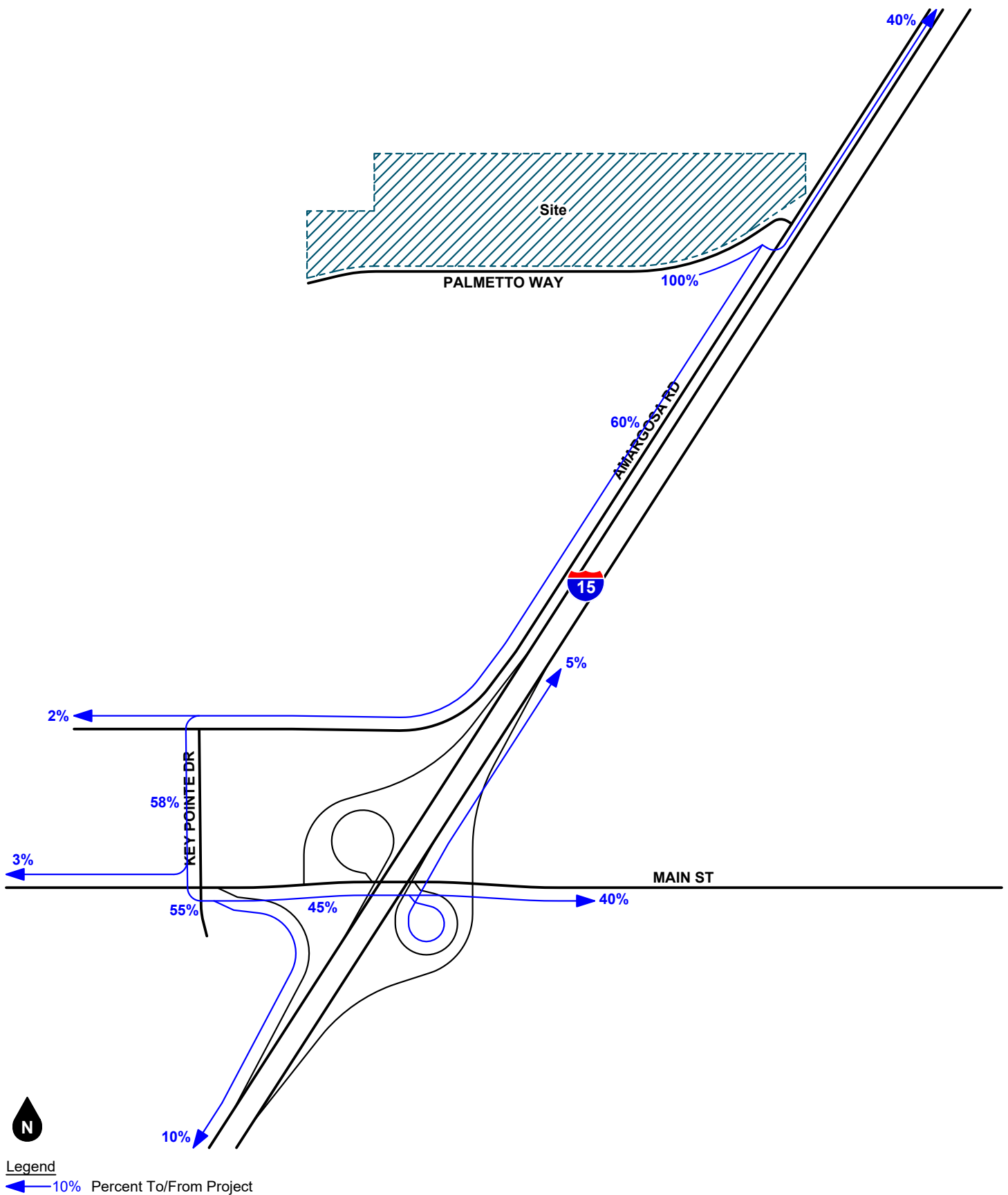
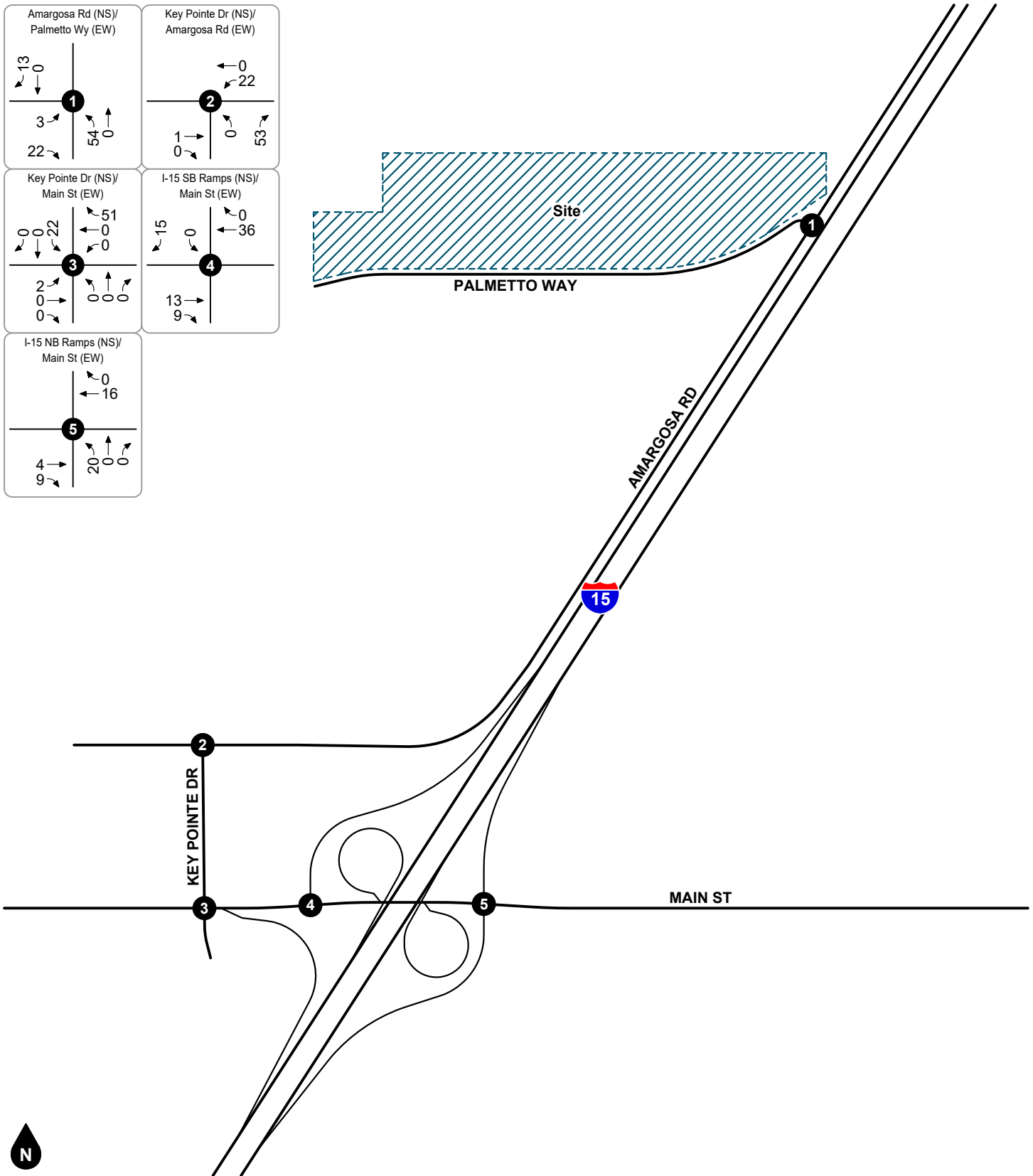
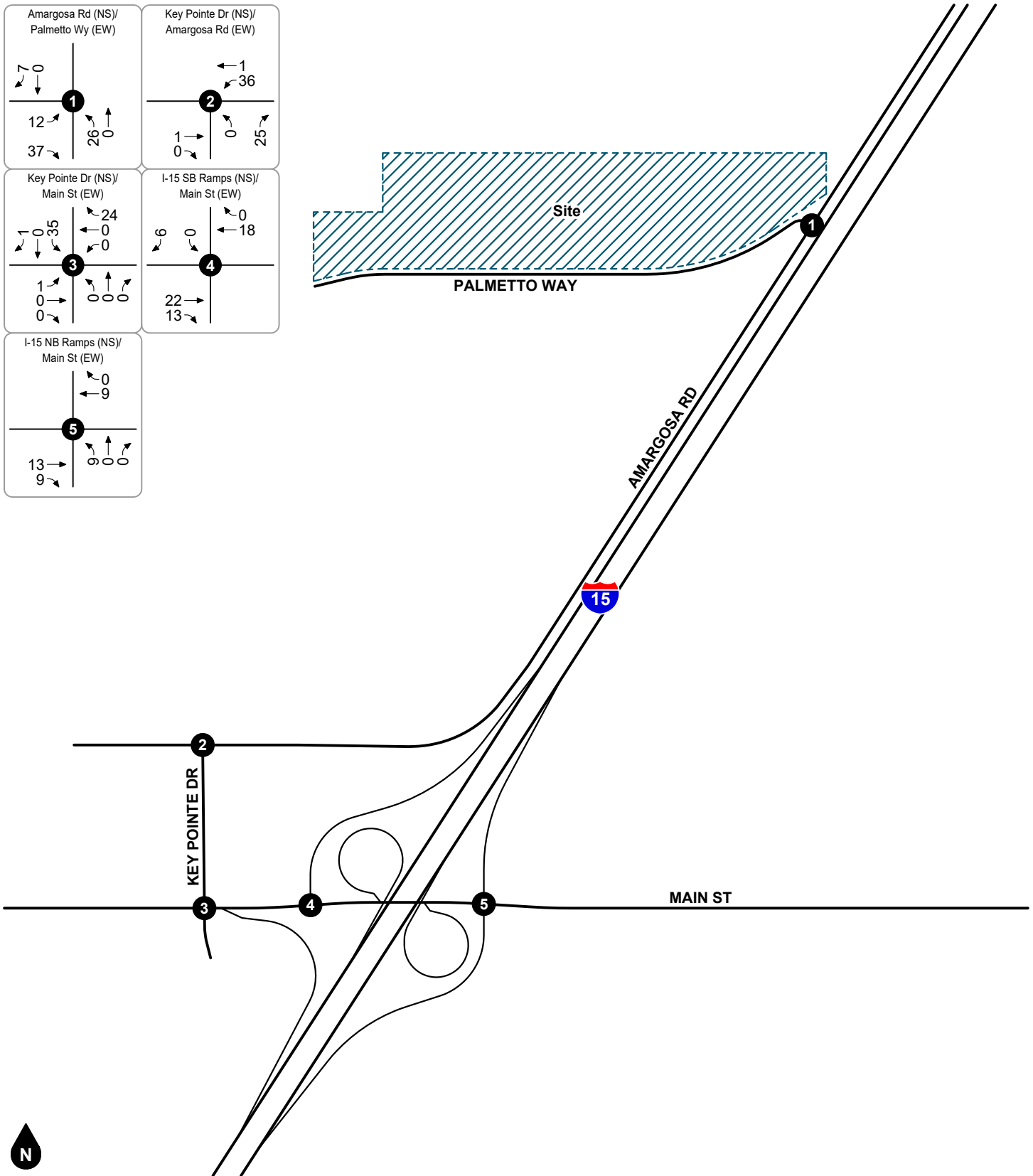


Figure 7
Alternative Land Use Trip Distribution



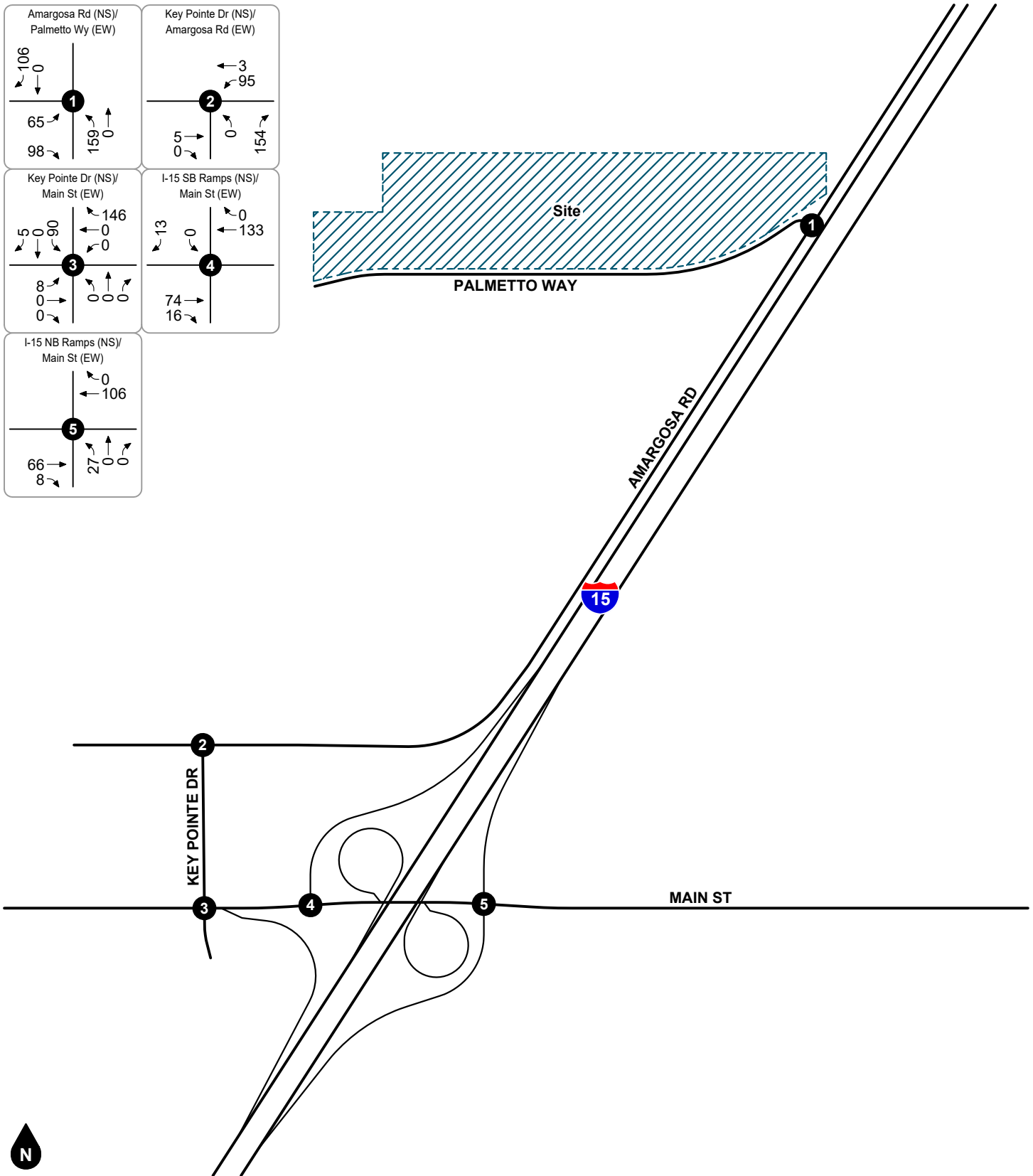
Legend
 # Study Intersection

Figure 8
Project AM Peak Hour Intersection Turning Movement Volumes



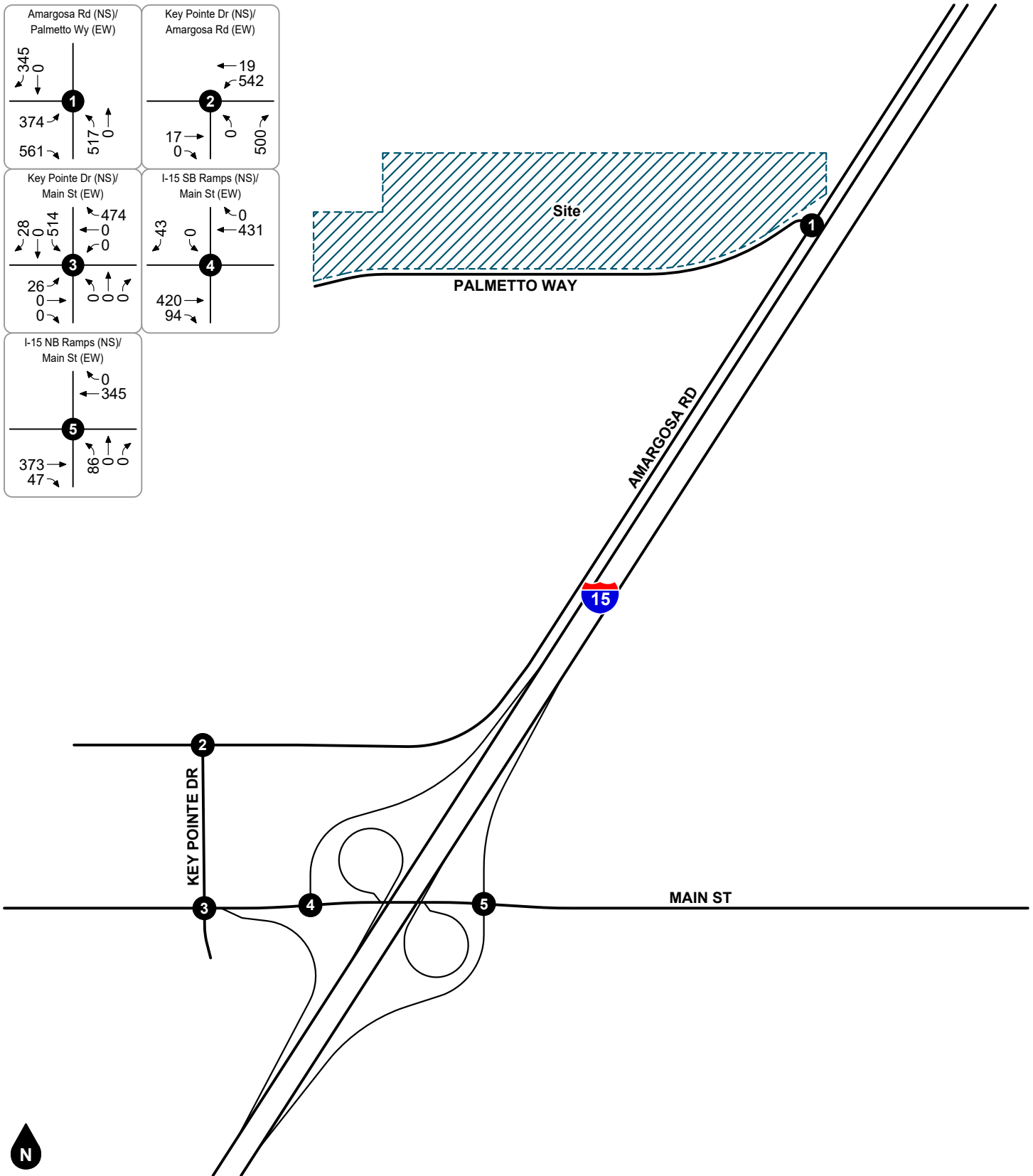
Legend
 # Study Intersection

Figure 9
Project PM Peak Hour Intersection Turning Movement Volumes



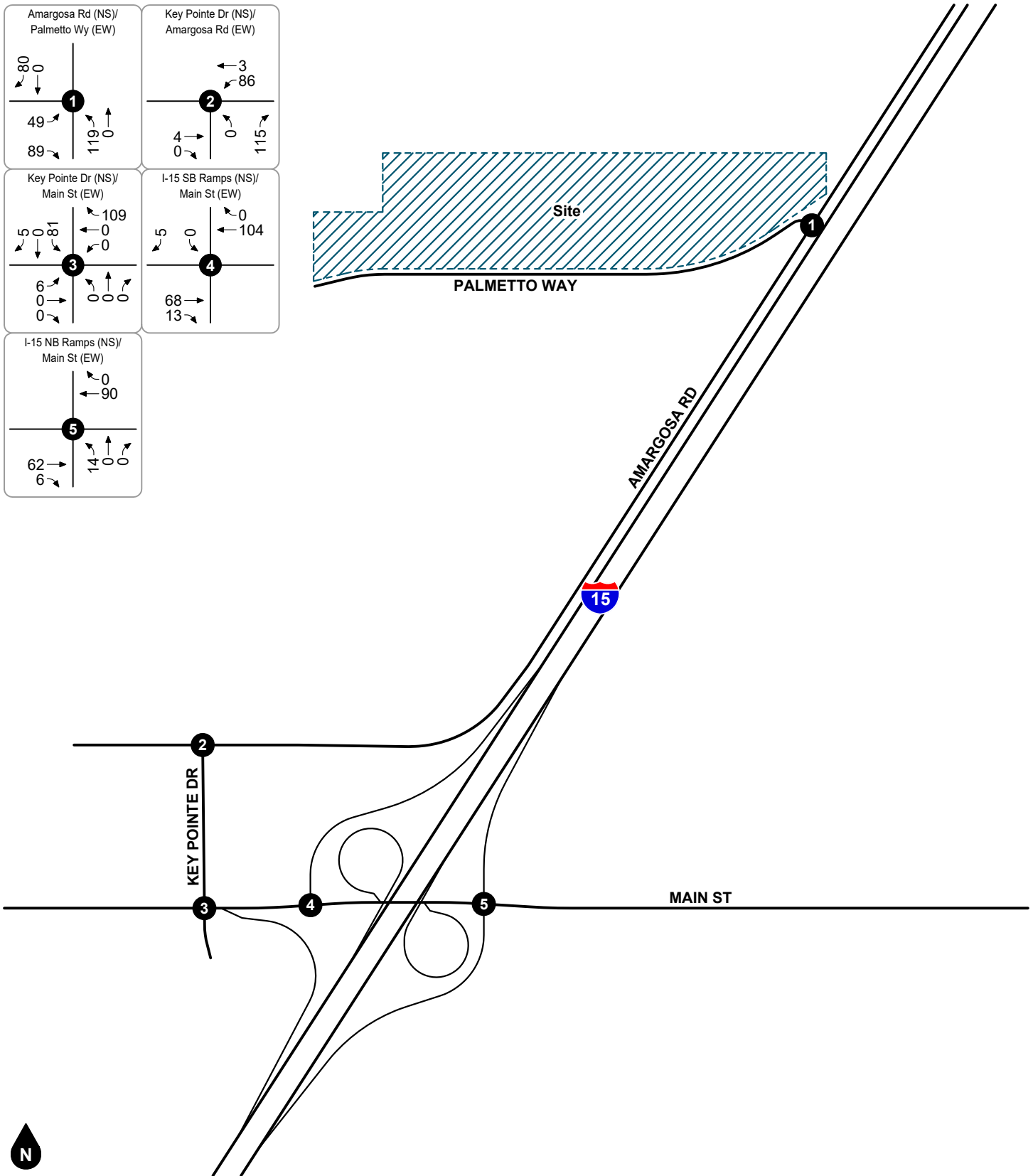
Legend
 # Study Intersection

Figure 10
Alternative Land Use
AM Peak Hour Intersection Turning Movement Volumes



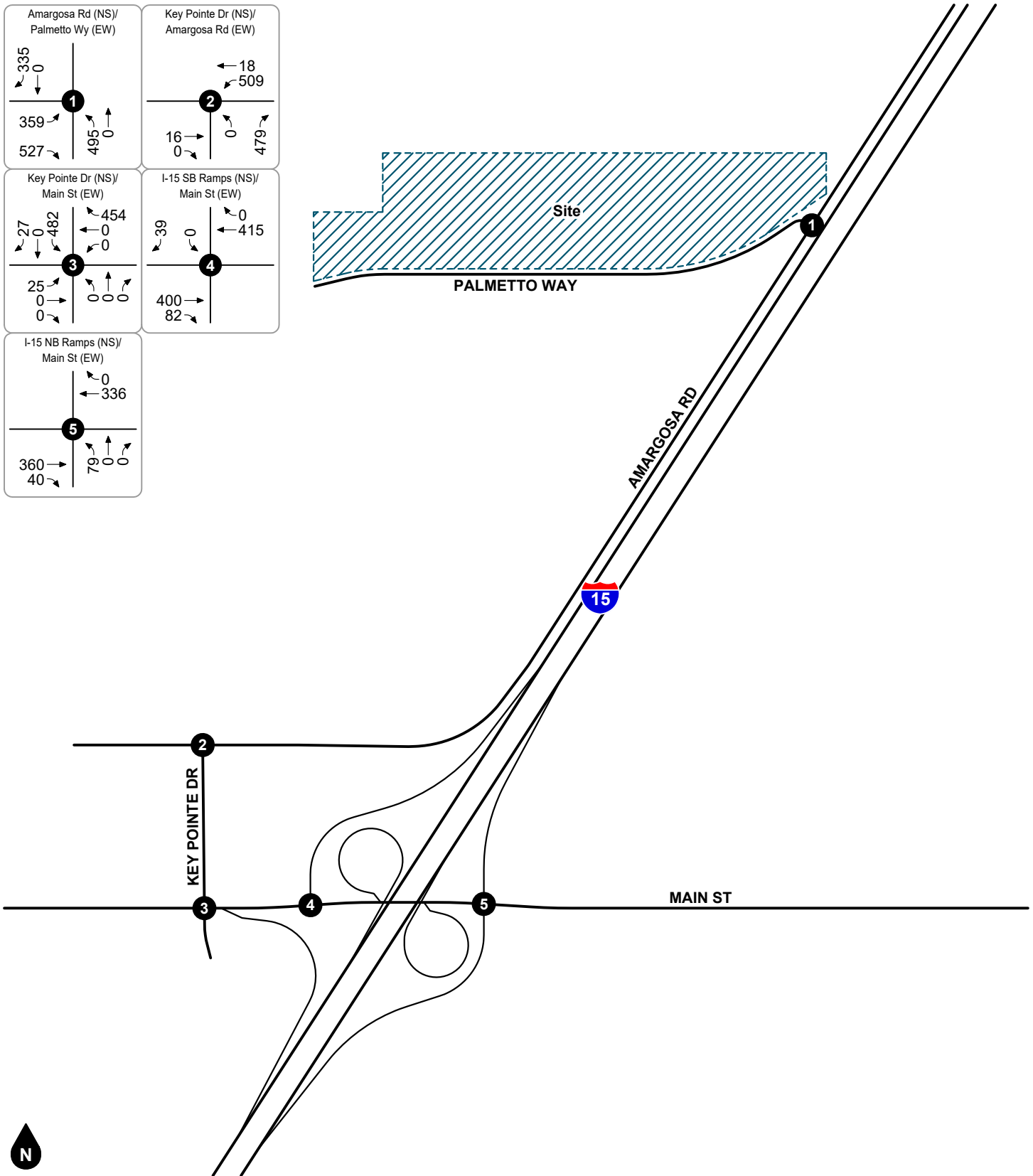
Legend
 # Study Intersection

Figure 11
Alternative Land Use
PM Peak Hour Intersection Turning Movement Volumes



Legend
Study Intersection

Figure 12
Additional Alternative Land Use Generated Trips
Versus Project Generated Trips
AM Peak Hour Intersection Turning Movement Volumes



Legend
 # Study Intersection

Figure 13
 Additional Alternative Land Use Generated Trips
 Versus Project Generated Trips
 PM Peak Hour Intersection Turning Movement Volumes

APPENDIX E

LEVEL OF SERVICE WORKSHEETS

EXISTING

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 1 Existing AM Peak Hour

Report File: C:\...\AME.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.002	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.005	8.7	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.464	14.4	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.344	8.2	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.376	4.2	A

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

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Northbound		Southbound		Eastbound	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↱		↔	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	196	208	0	0	0
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	55	59	0	0	0
Total Analysis Volume [veh/h]	0	221	234	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	0.00	10.94	9.30
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		10.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	163	1	7	140
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	48	0	2	41
Total Analysis Volume [veh/h]	0	6	190	1	8	164
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.99	8.74	0.00	0.00	7.53	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.39	0.00	0.00	0.29	0.15
d_A, Approach Delay [s/veh]	8.74		0.00		0.36	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.464

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	26	37	7	3	8	250	2	52	164	36
Total Analysis Volume [veh/h]	4	13	105	148	28	12	32	999	9	208	655	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12	12	12	4	36	36	10	42	42
g / C, Green / Cycle	0.17	0.17	0.17	0.17	0.17	0.06	0.52	0.52	0.14	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.06	0.11	0.02	0.02	0.20	0.01	0.12	0.15	0.15
s, saturation flow rate [veh/h]	1393	1800	1530	1305	1710	1619	4631	1445	1619	3427	1641
c, Capacity [veh/h]	265	298	254	272	283	103	2414	753	229	2055	984
d1, Uniform Delay [s]	27.40	24.53	26.02	29.64	24.90	31.29	10.03	8.07	29.29	6.57	6.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.05	0.95	1.45	0.21	1.56	0.46	0.03	8.77	0.28	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.04	0.38	0.50	0.13	0.29	0.38	0.01	0.84	0.24	0.25
d, Delay for Lane Group [s/veh]	27.42	24.58	26.96	31.10	25.11	32.86	10.49	8.09	38.06	6.85	7.18
Lane Group LOS	C	C	C	C	C	C	B	A	D	A	A
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.17	1.45	2.26	0.52	0.49	2.23	0.05	3.39	1.24	1.29
50th-Percentile Queue Length [ft/ln]	1.47	4.14	36.20	56.47	13.01	12.14	55.84	1.24	84.64	31.11	32.33
95th-Percentile Queue Length [veh/ln]	0.11	0.30	2.61	4.07	0.94	0.87	4.02	0.09	6.09	2.24	2.33
95th-Percentile Queue Length [ft/ln]	2.65	7.45	65.16	101.65	23.42	21.85	100.50	2.24	152.36	56.00	58.19

Movement, Approach, & Intersection Results

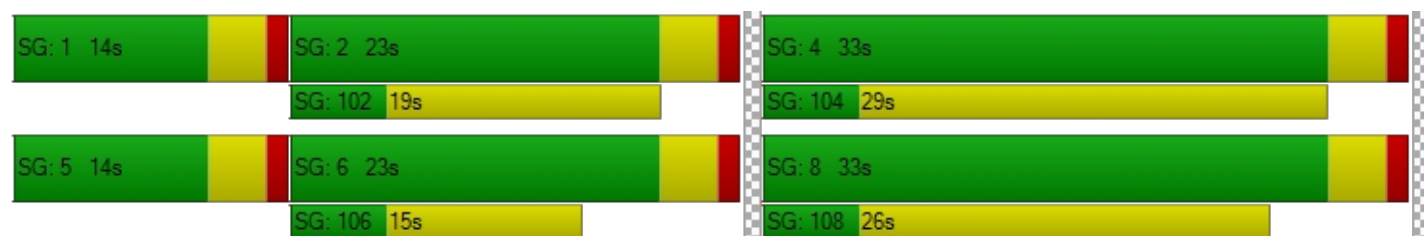
d_M, Delay for Movement [s/veh]	27.42	24.58	26.96	31.10	25.11	25.11	32.86	10.49	8.09	38.06	6.91	7.18
Movement LOS	C	C	C	C	C	C	C	B	A	D	A	A
d_A, Approach Delay [s/veh]	26.73			29.82			11.17			13.40		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.41											
Intersection LOS	B											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	26.58			26.58			26.58			26.58		
I_p,int, Pedestrian LOS Score for Intersection	2.203			2.042			3.042			3.263		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	828			828			543			543		
d_b, Bicycle Delay [s]	12.01			12.01			18.58			18.58		
I_b,int, Bicycle LOS Score for Intersection	1.746			1.847			2.090			2.072		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.344

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	308	0	177	0	1009	0	0	756	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	82	0	47	0	267	0	0	200	0
Total Analysis Volume [veh/h]	0	0	0	326	0	188	0	1069	0	0	801	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		10	10	42	42	42	42
g / C, Green / Cycle		0.17	0.17	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate		0.10	0.12	0.21	0.00	0.15	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		499	258	3425	1069	3425	1069
d1, Uniform Delay [s]		23.22	23.53	3.45	0.00	3.24	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.25	3.27	0.22	0.00	0.15	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.62	0.69	0.29	0.00	0.22	0.00
d, Delay for Lane Group [s/veh]		24.47	26.80	3.67	0.00	3.38	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		1.98	2.44	0.59	0.00	0.68	0.00
50th-Percentile Queue Length [ft/ln]		49.49	60.97	14.74	0.00	17.10	0.00
95th-Percentile Queue Length [veh/ln]		3.56	4.39	1.06	0.00	1.23	0.00
95th-Percentile Queue Length [ft/ln]		89.09	109.74	26.54	0.00	30.77	0.00

Movement, Approach, & Intersection Results

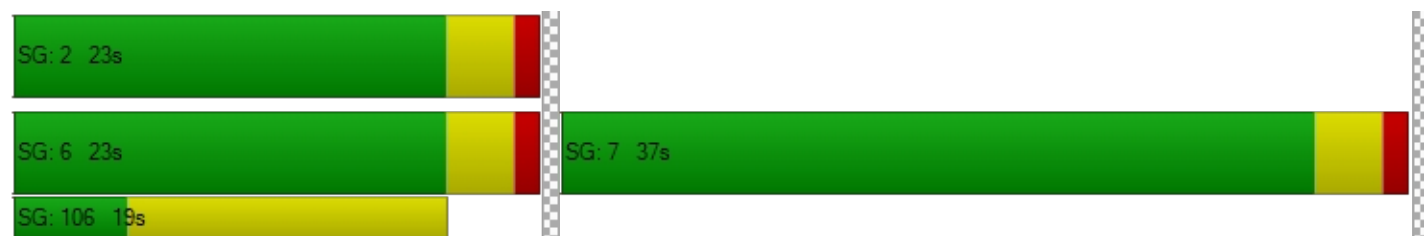
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.47	0.00	26.80	0.00	3.67	0.00	0.00	3.38	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			25.32			3.67			3.38		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.24											
Intersection LOS	A											
Intersection V/C	0.344											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.72			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.230			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1098			632			632		
d_b, Bicycle Delay [s]	30.05			6.11			14.05			14.05		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.115			1.975		
Bicycle LOS	D			A			B			A		

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.376

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	3	41	0	0	0	0	1016	0	0	1103	461
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	1	11	0	0	0	0	265	0	0	287	120
Total Analysis Volume [veh/h]	85	3	43	0	0	0	0	1058	0	0	1149	480
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	16	0	0	0	0	0	69	0	0	69	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	85	85	85		85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		68	68	68	68
g / C, Green / Cycle	0.11	0.11	0.11		0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.05	0.01	0.01		0.21	0.00	0.22	0.30
s, saturation flow rate [veh/h]	1714	1562	1530		4903	1530	4903	1530
c, Capacity [veh/h]	194	177	173		3888	1213	3888	1213
d1, Uniform Delay [s]	35.19	33.98	33.99		2.30	0.00	2.35	2.61
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	0.32	0.33		0.16	0.00	0.18	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.13	0.13		0.26	0.00	0.28	0.38
d, Delay for Lane Group [s/veh]	36.66	34.30	34.32		2.47	0.00	2.54	3.52
Lane Group LOS	D	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.64	0.42	0.42		0.52	0.00	0.58	1.02
50th-Percentile Queue Length [ft/ln]	40.94	10.53	10.44		13.06	0.00	14.52	25.56
95th-Percentile Queue Length [veh/ln]	2.95	0.76	0.75		0.94	0.00	1.05	1.84
95th-Percentile Queue Length [ft/ln]	73.69	18.96	18.79		23.52	0.00	26.14	46.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.66	34.30	34.31	0.00	0.00	0.00	0.00	2.47	0.00	0.00	2.54	3.52
Movement LOS	D	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	35.84			0.00			2.47			2.83		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	4.23											
Intersection LOS	A											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.02	34.02	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.161	1.875	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	282	0	1528	1528
d_b, Bicycle Delay [s]	31.39	42.54	2.37	2.37
I_b,int, Bicycle LOS Score for Intersection	1.768	4.132	2.118	2.420
Bicycle LOS	A	D	B	B

Sequence

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



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 1 Existing PM Peak Hour

Report File: C:\...\PME.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.1	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.006	12.1	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.659	22.2	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.524	10.8	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.628	12.1	B

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

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Northbound		Southbound		Eastbound	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↱		↔	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	443	417	0	0	0
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	121	114	0	0	0
Total Analysis Volume [veh/h]	1	484	456	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.12	0.00	0.00	0.00	15.98	10.62
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.02		0.00		13.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	19	287	9	12	335
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	77	2	3	89
Total Analysis Volume [veh/h]	3	20	307	10	13	358
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.07	9.19	0.00	0.00	7.83	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.07	0.00	0.00	0.02	0.01
95th-Percentile Queue Length [ft/ln]	0.44	1.66	0.00	0.00	0.50	0.25
d_A, Approach Delay [s/veh]	9.58		0.00		0.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.659

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	62	61	22	4	12	249	5	76	286	50
Total Analysis Volume [veh/h]	32	59	248	243	86	15	47	998	19	303	1143	200
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	19	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	6	26	26	15	35	35
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.08	0.34	0.34	0.20	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.21	0.06	0.03	0.21	0.01	0.18	0.26	0.26
s, saturation flow rate [veh/h]	1317	1800	1530	1098	1753	1619	4631	1445	1619	3427	1666
c, Capacity [veh/h]	390	532	453	363	519	134	1594	497	324	1582	769
d1, Uniform Delay [s]	23.16	19.21	22.09	27.39	19.72	32.50	20.41	16.34	29.36	14.62	14.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.98	1.99	0.18	1.52	1.75	0.14	11.43	1.42	2.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.11	0.53	0.65	0.19	0.34	0.61	0.04	0.91	0.55	0.56
d, Delay for Lane Group [s/veh]	23.24	19.30	23.06	29.37	19.90	34.02	22.16	16.48	40.78	16.03	17.53
Lane Group LOS	C	B	C	C	B	C	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.43	0.71	3.50	4.08	1.26	0.78	4.29	0.20	5.67	4.69	4.88
50th-Percentile Queue Length [ft/ln]	10.79	17.69	87.45	101.94	31.59	19.56	107.34	4.96	141.83	117.15	122.01
95th-Percentile Queue Length [veh/ln]	0.78	1.27	6.30	7.34	2.27	1.41	7.69	0.36	9.58	8.24	8.50
95th-Percentile Queue Length [ft/ln]	19.42	31.84	157.41	183.49	56.85	35.20	192.29	8.94	239.49	205.91	212.59

Movement, Approach, & Intersection Results

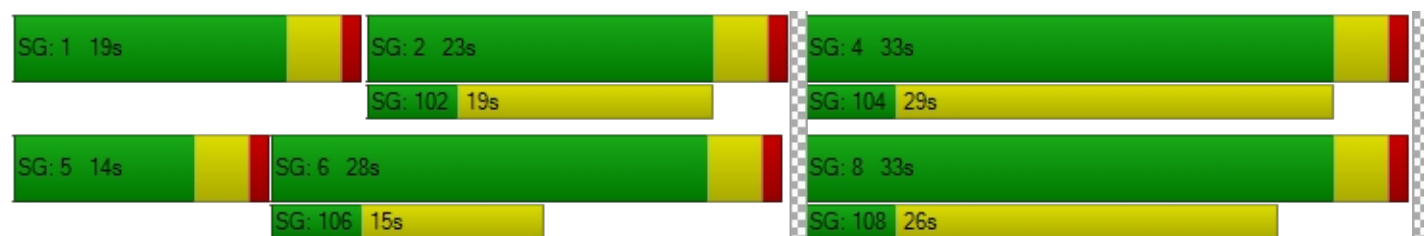
d_M, Delay for Movement [s/veh]	23.24	19.30	23.06	29.37	19.90	19.90	34.02	22.16	16.48	40.78	16.35	17.53
Movement LOS	C	B	C	C	B	B	C	C	B	D	B	B
d_A, Approach Delay [s/veh]	22.43			26.57			22.59			21.00		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.21											
Intersection LOS	C											
Intersection V/C	0.659											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	29.05			29.05			29.05			29.05		
I_p,int, Pedestrian LOS Score for Intersection	2.300			2.138			3.207			3.629		
Crosswalk LOS	B			B			C			D		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	773			773			507			640		
d_b, Bicycle Delay [s]	14.12			14.12			20.92			17.35		
I_b,int, Bicycle LOS Score for Intersection	2.102			2.112			2.128			2.440		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.524

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	443	0	351	0	1272	0	0	1253	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	113	0	90	0	324	0	0	320	0
Total Analysis Volume [veh/h]	0	0	0	452	0	358	0	1298	0	0	1279	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		17	17	35	35	35	35
g / C, Green / Cycle		0.29	0.29	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate		0.15	0.23	0.26	0.00	0.26	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		849	439	2845	888	2845	888
d1, Uniform Delay [s]		18.01	19.87	7.16	0.00	7.12	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.50	3.51	0.51	0.00	0.50	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.52	0.80	0.45	0.00	0.44	0.00
d, Delay for Lane Group [s/veh]		18.51	23.38	7.67	0.00	7.62	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.41	4.55	1.97	0.00	2.44	0.00
50th-Percentile Queue Length [ft/ln]		60.36	113.65	49.15	0.00	60.88	0.00
95th-Percentile Queue Length [veh/ln]		4.35	8.04	3.54	0.00	4.38	0.00
95th-Percentile Queue Length [ft/ln]		108.64	201.07	88.46	0.00	109.59	0.00

Movement, Approach, & Intersection Results

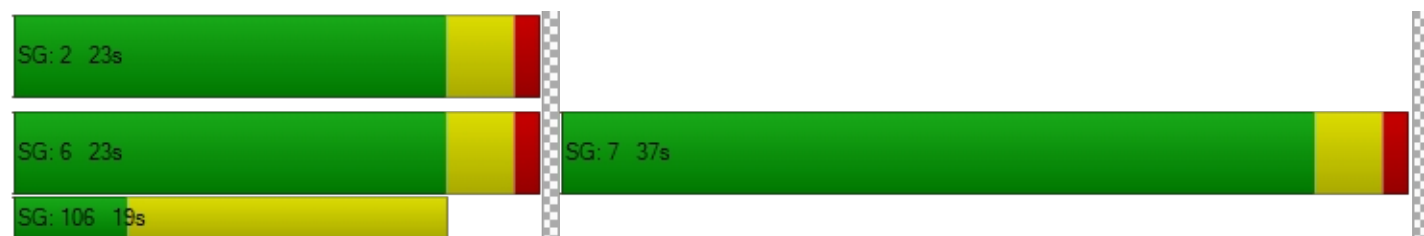
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.51	0.00	23.38	0.00	7.67	0.00	0.00	7.62	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			20.66			7.67			7.62		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.76											
Intersection LOS	B											
Intersection V/C	0.524											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.72			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.305			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1098			632			632		
d_b, Bicycle Delay [s]	30.05			6.11			14.05			14.05		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.259			2.249		
Bicycle LOS	D			A			B			B		

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.628

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	4	772	0	0	0	0	1448	0	0	1529	404
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	1	198	0	0	0	0	372	0	0	393	104
Total Analysis Volume [veh/h]	195	4	793	0	0	0	0	1488	0	0	1571	415
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19		33	33	33	33
g / C, Green / Cycle	0.31	0.31	0.31		0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.11	0.25	0.25		0.30	0.00	0.31	0.26
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	538	481	480		2712	846	2712	846
d1, Uniform Delay [s]	15.94	18.97	18.98		8.53	0.00	8.73	8.17
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	3.34	3.37		0.76	0.00	0.86	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.81	0.81		0.53	0.00	0.56	0.48
d, Delay for Lane Group [s/veh]	16.33	22.31	22.35		9.29	0.00	9.59	10.10
Lane Group LOS	B	C	C		A	A	A	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.89	4.91	4.91		2.69	0.00	2.92	2.46
50th-Percentile Queue Length [ft/ln]	47.36	122.72	122.86		67.29	0.00	72.98	61.50
95th-Percentile Queue Length [veh/ln]	3.41	8.54	8.55		4.84	0.00	5.25	4.43
95th-Percentile Queue Length [ft/ln]	85.24	213.56	213.75		121.12	0.00	131.37	110.70

Movement, Approach, & Intersection Results

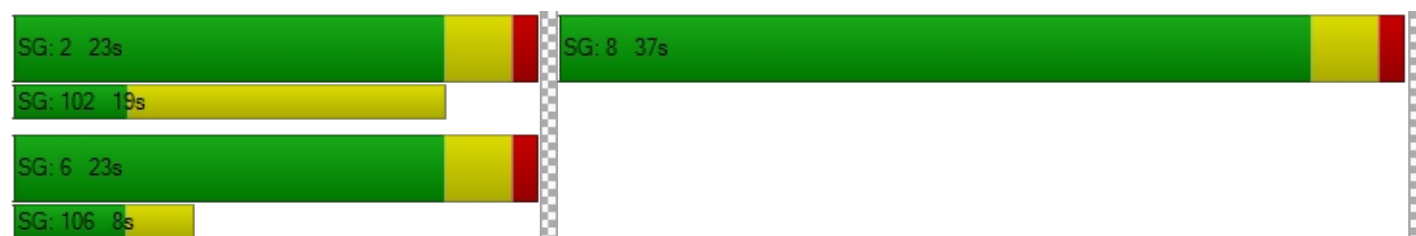
d_M, Delay for Movement [s/veh]	16.33	22.31	22.33	0.00	0.00	0.00	0.00	9.29	0.00	0.00	9.59	10.10
Movement LOS	B	C	C					A	A		A	B
d_A, Approach Delay [s/veh]	21.15			0.00			9.29			9.70		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	12.11											
Intersection LOS	B											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.347	1.802	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	3.154	4.132	2.356	2.623
Bicycle LOS	C	D	B	B

Sequence

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



OPENING YEAR (2024) WITHOUT PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 2 Opening Year (2024) Without Project AM Peak
Hour

Report File: C:\...\AMOYWO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.002	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.055	9.0	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.526	14.8	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.479	9.9	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.470	5.7	A

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

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Northbound		Southbound		Eastbound	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↱		↻	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	12	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	207	228	0	0	0
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	58	64	0	0	0
Total Analysis Volume [veh/h]	0	233	257	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	0.00	11.18	9.41
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		10.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.055

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	1	0	21	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	53	171	1	28	146
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	50	0	8	43
Total Analysis Volume [veh/h]	0	62	200	1	33	171
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	10.47	8.96	0.00	0.00	7.57	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.05	0.02
95th-Percentile Queue Length [ft/ln]	0.00	4.37	0.00	0.00	1.19	0.59
d_A, Approach Delay [s/veh]	8.96		0.00		1.22	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

14.8
B
0.526

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	21	0	0	1	106	0	0	435	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	101	164	27	11	32	1069	8	201	1067	184
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	27	44	7	3	9	288	2	54	288	50
Total Analysis Volume [veh/h]	4	13	109	177	29	12	35	1153	9	217	1151	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	13	5	35	35	10	40	40
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.19	0.07	0.50	0.50	0.14	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.13	0.02	0.02	0.23	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1391	1800	1530	1300	1713	1619	4631	1445	1619	3427	1668
c, Capacity [veh/h]	294	338	287	299	322	108	2305	719	231	1968	958
d1, Uniform Delay [s]	26.11	23.26	24.73	28.90	23.62	31.12	11.48	8.88	29.37	8.42	8.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.04	0.73	1.58	0.16	1.52	0.67	0.03	10.60	0.68	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.04	0.35	0.55	0.12	0.30	0.46	0.01	0.87	0.43	0.43
d, Delay for Lane Group [s/veh]	26.13	23.30	25.47	30.48	23.79	32.64	12.16	8.91	39.97	9.10	9.82
Lane Group LOS	C	C	C	C	C	C	B	A	D	A	A
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.16	1.45	2.69	0.52	0.51	2.92	0.05	3.64	2.70	2.82
50th-Percentile Queue Length [ft/ln]	1.43	3.99	36.30	67.13	12.88	12.86	73.07	1.35	90.92	67.56	70.53
95th-Percentile Queue Length [veh/ln]	0.10	0.29	2.61	4.83	0.93	0.93	5.26	0.10	6.55	4.86	5.08
95th-Percentile Queue Length [ft/ln]	2.57	7.18	65.35	120.83	23.19	23.15	131.53	2.42	163.66	121.60	126.96

Movement, Approach, & Intersection Results

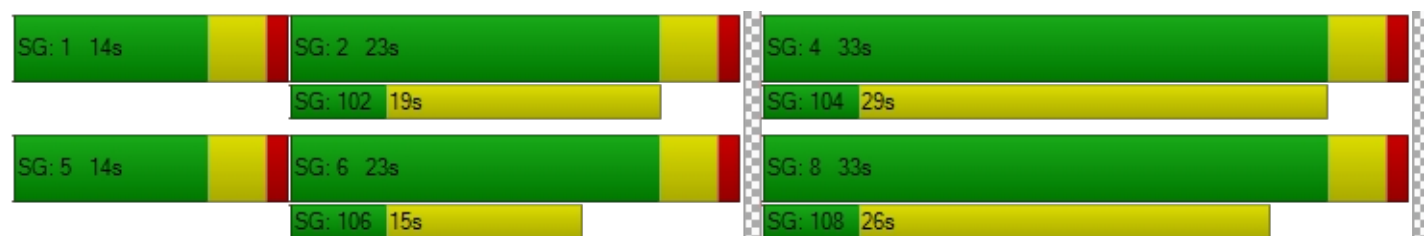
d_M, Delay for Movement [s/veh]	26.13	23.30	25.47	30.48	23.79	23.79	32.64	12.16	8.91	39.97	9.25	9.82
Movement LOS	C	C	C	C	C	C	C	B	A	D	A	A
d_A, Approach Delay [s/veh]	25.27			29.22			12.72			13.58		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.82											
Intersection LOS	B											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	26.59			26.59			26.59			26.59		
I_p,int, Pedestrian LOS Score for Intersection	2.206			2.069			3.165			3.463		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	828			828			543			543		
d_b, Bicycle Delay [s]	12.02			12.02			18.59			18.59		
I_b,int, Bicycle LOS Score for Intersection	1.753			1.893			2.170			2.358		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 9.9
Level Of Service: A
Volume to Capacity (v/c): 0.479

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	142	0	96	31	0	340	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	320	0	326	0	1146	31	0	1127	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	0	86	0	303	8	0	298	0
Total Analysis Volume [veh/h]	0	0	0	339	0	345	0	1214	33	0	1194	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	36	36	36	36
g / C, Green / Cycle		0.26	0.26	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate		0.11	0.21	0.23	0.02	0.23	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		786	406	2949	920	2949	920
d1, Uniform Delay [s]		18.20	20.63	6.24	4.88	6.21	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.34	3.84	0.39	0.07	0.38	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.41	0.80	0.39	0.03	0.38	0.00
d, Delay for Lane Group [s/veh]		18.54	24.48	6.62	4.95	6.58	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		1.72	4.33	1.52	0.11	1.93	0.00
50th-Percentile Queue Length [ft/ln]		43.07	108.16	38.08	2.68	48.33	0.00
95th-Percentile Queue Length [veh/ln]		3.10	7.74	2.74	0.19	3.48	0.00
95th-Percentile Queue Length [ft/ln]		77.53	193.44	68.55	4.83	87.00	0.00

Movement, Approach, & Intersection Results

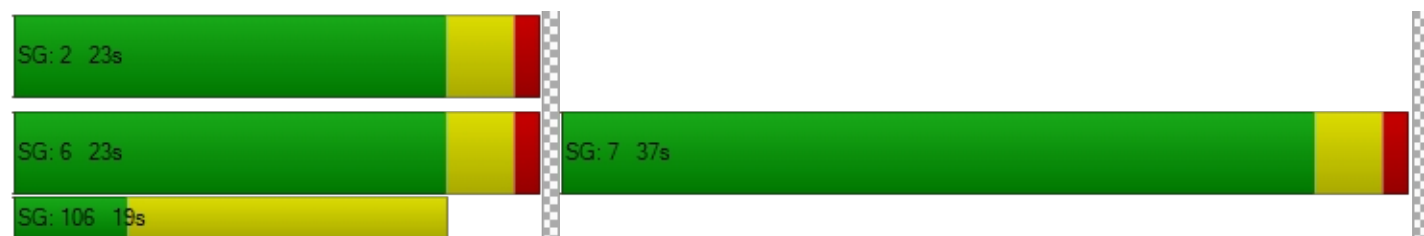
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.54	0.00	24.48	0.00	6.62	4.95	0.00	6.58	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			21.54			6.58			6.58		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.86											
Intersection LOS	A											
Intersection V/C	0.479											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.269	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.207	2.179
Bicycle LOS	D	A	B	B

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.470

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	108	0	0	0	0	0	0	56	40	0	232	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	3	43	0	0	0	0	1113	40	0	1380	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	1	11	0	0	0	0	290	10	0	359	125
Total Analysis Volume [veh/h]	201	3	45	0	0	0	0	1159	42	0	1438	500
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	65	65	65		65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		47	47	47	47
g / C, Green / Cycle	0.15	0.15	0.15		0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.11	0.01	0.01		0.23	0.03	0.28	0.31
s, saturation flow rate [veh/h]	1714	1560	1530		4903	1530	4903	1530
c, Capacity [veh/h]	263	240	235		3548	1107	3548	1107
d1, Uniform Delay [s]	26.32	23.70	23.71		3.22	2.56	3.46	3.63
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.02	0.17	0.18		0.23	0.06	0.32	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.10	0.10		0.31	0.04	0.39	0.43
d, Delay for Lane Group [s/veh]	30.33	23.88	23.88		3.45	2.62	3.79	4.87
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.00	0.30	0.30		0.65	0.07	0.87	1.22
50th-Percentile Queue Length [ft/ln]	74.97	7.60	7.50		16.20	1.69	21.71	30.38
95th-Percentile Queue Length [veh/ln]	5.40	0.55	0.54		1.17	0.12	1.56	2.19
95th-Percentile Queue Length [ft/ln]	134.95	13.69	13.49		29.15	3.04	39.09	54.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.33	23.88	23.88	0.00	0.00	0.00	0.00	3.45	2.62	0.00	3.79	4.87
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	29.09			0.00			3.42			4.07		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	5.68											
Intersection LOS	A											
Intersection V/C	0.470											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.17	24.17	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.184	1.879	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	0	584	584
d_b, Bicycle Delay [s]	5.64	32.55	16.32	16.32
I_b,int, Bicycle LOS Score for Intersection	1.954	4.132	2.194	2.583
Bicycle LOS	A	D	B	B

Sequence

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



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 2 Opening Year (2024) Without Project PM Peak
Hour

Report File: C:\...\PMOYWO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.2	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.007	13.2	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.795	28.8	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.677	13.0	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.685	13.0	B

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

Intersection Level Of Service Report**Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.2
A
0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	471	441	0	0	0
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	120	0	0	0
Total Analysis Volume [veh/h]	1	515	482	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.19	0.00	0.00	0.00	16.79	10.80
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.02		0.00		13.80	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	1	0	32	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	44	300	9	44	350
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	12	80	2	12	93
Total Analysis Volume [veh/h]	3	47	321	10	47	374
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	13.23	9.36	0.00	0.00	7.90	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.16	0.00	0.00	0.08	0.04
95th-Percentile Queue Length [ft/ln]	0.51	3.99	0.00	0.00	1.88	0.94
d_A, Approach Delay [s/veh]	9.60		0.00		0.88	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.07					
Intersection LOS	B					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 28.8
Level Of Service: C
Volume to Capacity (v/c): 0.795

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	31	0	1	1	402	0	0	267	23
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	59	251	277	87	17	49	1411	19	307	1423	225
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	65	71	22	4	13	363	5	79	366	58
Total Analysis Volume [veh/h]	33	61	258	285	90	17	50	1452	20	316	1464	231
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	49	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	42	42	22	56	56
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.28	0.07	0.40	0.40	0.21	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.25	0.06	0.03	0.30	0.01	0.19	0.32	0.32
s, saturation flow rate [veh/h]	1311	1800	1530	1086	1750	1619	4631	1445	1619	3427	1678
c, Capacity [veh/h]	348	497	423	323	483	119	1844	576	342	1838	900
d1, Uniform Delay [s]	33.37	28.47	32.94	41.23	29.28	46.56	27.38	19.29	40.35	16.67	16.73
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.11	1.34	7.01	0.22	2.30	3.15	0.11	9.46	1.47	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.12	0.59	0.86	0.22	0.41	0.77	0.03	0.90	0.60	0.61
d, Delay for Lane Group [s/veh]	33.48	28.57	34.28	48.24	29.50	48.86	30.53	19.39	49.81	18.14	19.79
Lane Group LOS	C	C	C	D	C	D	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.67	1.13	5.63	7.86	2.05	1.25	9.84	0.28	8.19	8.29	8.61
50th-Percentile Queue Length [ft/ln]	16.74	28.18	140.86	196.62	51.16	31.29	246.08	7.05	204.70	207.33	215.15
95th-Percentile Queue Length [veh/ln]	1.21	2.03	9.53	12.46	3.68	2.25	14.99	0.51	12.88	13.02	13.42
95th-Percentile Queue Length [ft/ln]	30.14	50.72	238.18	311.60	92.09	56.32	374.72	12.69	322.02	325.40	335.43

Movement, Approach, & Intersection Results

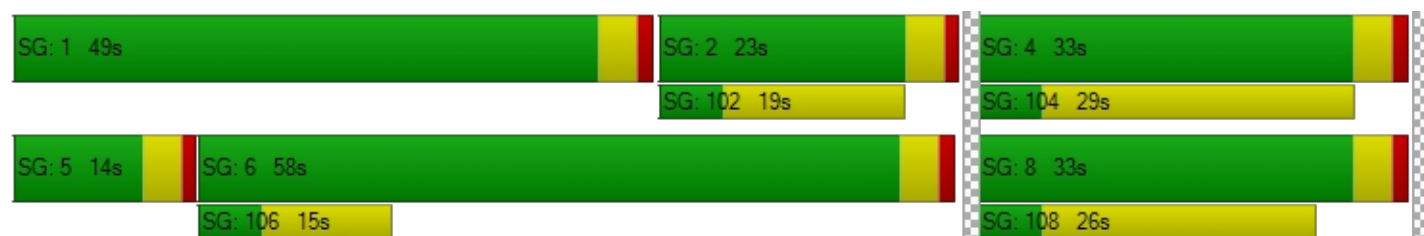
d_M, Delay for Movement [s/veh]	33.48	28.57	34.28	48.24	29.50	29.50	48.86	30.53	19.39	49.81	18.51	19.79
Movement LOS	C	C	C	D	C	C	D	C	B	D	B	B
d_A, Approach Delay [s/veh]	33.22			43.13			30.99			23.57		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	28.80											
Intersection LOS	C											
Intersection V/C	0.795											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	43.92			43.92			43.92			43.92		
I_p,int, Pedestrian LOS Score for Intersection	2.324			2.181			3.379			3.901		
Crosswalk LOS	B			B			C			D		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	552			552			362			1028		
d_b, Bicycle Delay [s]	27.54			27.54			35.25			12.41		
I_b,int, Bicycle LOS Score for Intersection	2.124			2.188			2.373			2.635		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

13.0
B
0.677

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	84	0	338	95	0	206	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	461	0	449	0	1661	95	0	1510	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	118	0	115	0	424	24	0	385	0
Total Analysis Volume [veh/h]	0	0	0	470	0	458	0	1695	97	0	1541	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	31	31	31	31
g / C, Green / Cycle		0.35	0.35	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.16	0.29	0.34	0.06	0.31	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		1031	533	2543	794	2543	794
d1, Uniform Delay [s]		15.12	18.07	10.53	7.42	10.06	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.31	3.86	1.33	0.31	1.03	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.45	0.84	0.65	0.12	0.59	0.00
d, Delay for Lane Group [s/veh]		15.43	21.93	11.86	7.73	11.09	0.00
Lane Group LOS		B	C	B	A	B	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.23	5.65	3.85	0.50	3.98	0.00
50th-Percentile Queue Length [ft/ln]		55.68	141.32	96.36	12.41	99.50	0.00
95th-Percentile Queue Length [veh/ln]		4.01	9.55	6.94	0.89	7.16	0.00
95th-Percentile Queue Length [ft/ln]		100.22	238.80	173.45	22.34	179.11	0.00

Movement, Approach, & Intersection Results

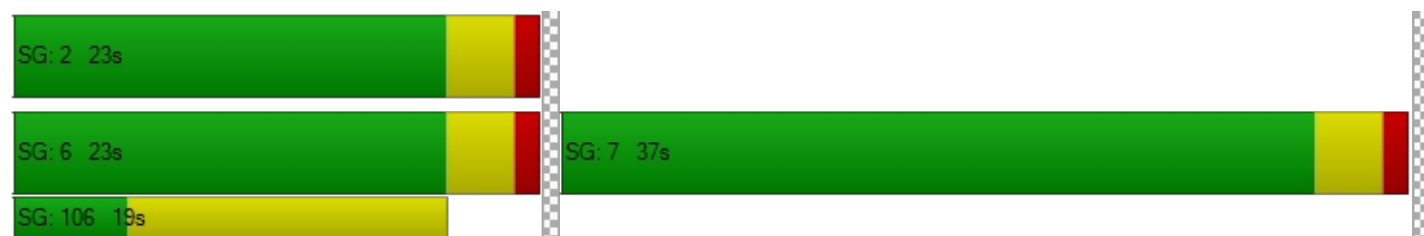
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.43	0.00	21.93	0.00	11.86	7.73	0.00	11.09	0.00
Movement LOS				B		C		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			18.63			11.64			11.09		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.70			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.334			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1099			633			633		
d_b, Bicycle Delay [s]	30.03			6.09			14.03			14.03		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.525			2.390		
Bicycle LOS	D			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.685

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵						↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	0	0	0	0	0	0	212	126	0	141	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	4	803	0	0	0	0	1718	126	0	1732	420
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	1	206	0	0	0	0	441	32	0	445	108
Total Analysis Volume [veh/h]	270	4	825	0	0	0	0	1766	129	0	1780	432
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		33	33	33	33
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.15	0.26	0.26		0.35	0.08	0.35	0.27
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	560	501	500		2649	827	2649	827
d1, Uniform Delay [s]	16.12	18.52	18.53		9.79	6.93	9.83	8.77
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	3.20	3.22		1.25	0.39	1.28	2.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.81	0.81		0.65	0.15	0.65	0.51
d, Delay for Lane Group [s/veh]	16.73	21.72	21.75		11.04	7.32	11.11	11.01
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.70	5.03	5.04		3.72	0.62	3.77	2.75
50th-Percentile Queue Length [ft/ln]	67.42	125.78	125.92		92.88	15.52	94.13	68.83
95th-Percentile Queue Length [veh/ln]	4.85	8.71	8.72		6.69	1.12	6.78	4.96
95th-Percentile Queue Length [ft/ln]	121.36	217.74	217.94		167.18	27.93	169.44	123.90

Movement, Approach, & Intersection Results

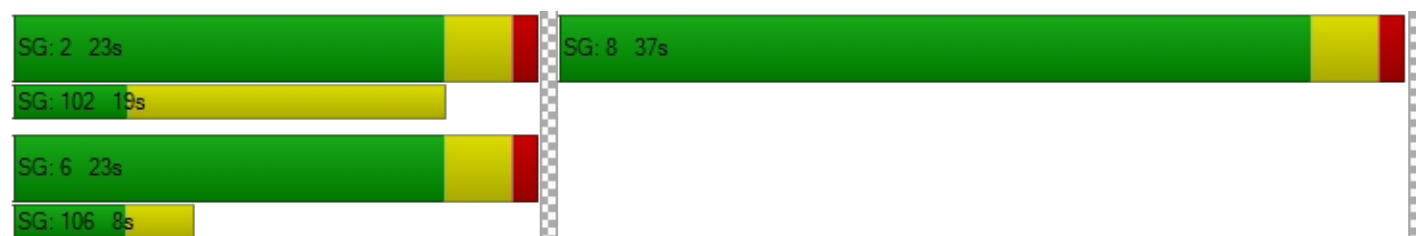
d_M, Delay for Movement [s/veh]	16.73	21.72	21.73	0.00	0.00	0.00	0.00	11.04	7.32	0.00	11.11	11.01
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.50			0.00			10.79			11.09		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.685											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.403	1.818	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	3.325	4.132	2.574	2.743
Bicycle LOS	C	D	B	B

Sequence

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



OPENING YEAR (2024) WITH PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 3 Opening Year (2024) With Project AM Peak Hour

Report File: C:\...\AMOYW.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.006	12.7	B
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.110	9.2	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.545	15.6	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.493	10.1	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.487	5.9	A
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.001	8.5	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.006	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.019	8.8	A

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

Intersection Level Of Service Report**Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

12.7
B
0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	3	12	13	3	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	207	228	13	3	22
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	58	64	4	1	6
Total Analysis Volume [veh/h]	61	233	257	15	3	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	7.75	0.00	0.00	0.00	12.71	9.61
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.32	2.32	0.00	0.00	2.60	2.60
d_A, Approach Delay [s/veh]	1.60		0.00		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.27					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.110

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	2	0	43	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	106	172	1	50	146
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	31	50	0	15	43
Total Analysis Volume [veh/h]	0	124	201	1	58	171
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.11	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	10.93	9.21	0.00	0.00	7.60	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.37	0.00	0.00	0.09	0.04
95th-Percentile Queue Length [ft/ln]	0.00	9.29	0.00	0.00	2.14	1.07
d_A, Approach Delay [s/veh]	9.21		0.00		1.94	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.85					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.545

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	43	0	0	3	106	0	0	435	98
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	101	186	27	11	34	1069	8	201	1067	235
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	27	50	7	3	9	288	2	54	288	63
Total Analysis Volume [veh/h]	4	13	109	201	29	12	37	1153	9	217	1151	254
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	14	14	5	34	34	10	39	39
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.07	0.48	0.48	0.14	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.14	0.02	0.02	0.23	0.01	0.12	0.26	0.26
s, saturation flow rate [veh/h]	1391	1800	1530	1300	1713	1619	4631	1445	1619	3427	1639
c, Capacity [veh/h]	320	370	315	322	352	113	2223	694	231	1896	907
d1, Uniform Delay [s]	25.02	22.24	23.65	28.24	22.59	30.97	12.31	9.52	29.37	9.40	9.40
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.04	0.58	1.64	0.13	1.49	0.75	0.03	10.60	0.82	1.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.32	0.58	0.11	0.30	0.48	0.01	0.87	0.46	0.46
d, Delay for Lane Group [s/veh]	25.03	22.28	24.24	29.88	22.73	32.46	13.06	9.55	39.97	10.23	11.12
Lane Group LOS	C	C	C	C	C	C	B	A	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.16	1.41	3.03	0.50	0.54	3.09	0.06	3.64	3.13	3.22
50th-Percentile Queue Length [ft/ln]	1.39	3.88	35.18	75.63	12.51	13.59	77.36	1.42	90.92	78.26	80.49
95th-Percentile Queue Length [veh/ln]	0.10	0.28	2.53	5.45	0.90	0.98	5.57	0.10	6.55	5.63	5.80
95th-Percentile Queue Length [ft/ln]	2.50	6.98	63.32	136.13	22.52	24.46	139.25	2.56	163.66	140.87	144.88

Movement, Approach, & Intersection Results

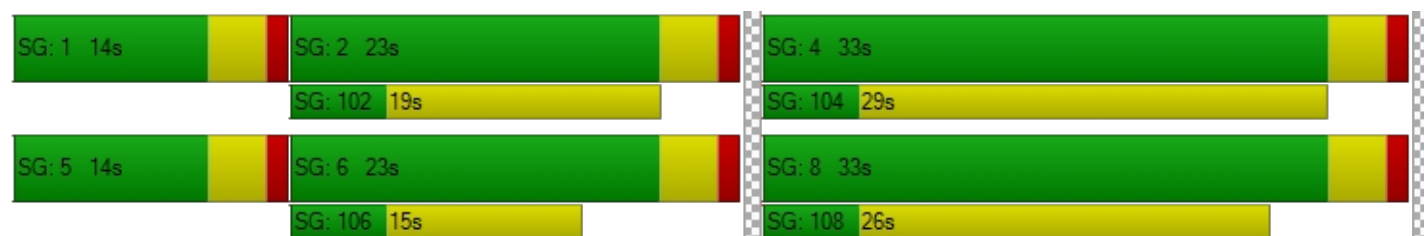
d_M, Delay for Movement [s/veh]	25.03	22.28	24.24	29.88	22.73	22.73	32.46	13.06	9.55	39.97	10.38	11.12
Movement LOS	C	C	C	C	C	C	C	B	A	D	B	B
d_A, Approach Delay [s/veh]	24.06			28.67			13.63			14.45		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.60											
Intersection LOS	B											
Intersection V/C	0.545											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	26.59			26.59			26.59			26.59		
I_p,int, Pedestrian LOS Score for Intersection	2.206			2.093			3.165			3.511		
Crosswalk LOS	B			B			C			D		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	828			828			543			543		
d_b, Bicycle Delay [s]	12.02			12.02			18.59			18.59		
I_b,int, Bicycle LOS Score for Intersection	1.753			1.929			2.171			2.386		
Bicycle LOS	A			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

10.1
B
0.493

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	157	0	109	40	0	376	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	320	0	341	0	1159	40	0	1163	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	0	90	0	307	11	0	308	0
Total Analysis Volume [veh/h]	0	0	0	339	0	361	0	1228	42	0	1232	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	36	36	36	36
g / C, Green / Cycle		0.27	0.27	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate		0.11	0.22	0.24	0.03	0.24	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		815	421	2902	906	2902	906
d1, Uniform Delay [s]		17.73	20.35	6.57	5.15	6.57	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.31	3.89	0.41	0.09	0.41	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.39	0.81	0.40	0.04	0.40	0.00
d, Delay for Lane Group [s/veh]		18.04	24.23	6.98	5.24	6.99	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.69	4.51	1.63	0.15	2.10	0.00
50th-Percentile Queue Length [ft/ln]		42.29	112.67	40.78	3.66	52.51	0.00
95th-Percentile Queue Length [veh/ln]		3.05	7.99	2.94	0.26	3.78	0.00
95th-Percentile Queue Length [ft/ln]		76.13	199.71	73.40	6.59	94.52	0.00

Movement, Approach, & Intersection Results

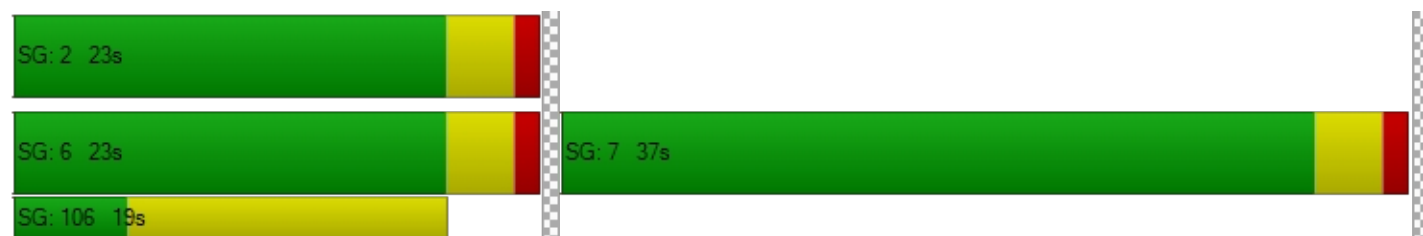
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.04	0.00	24.23	0.00	6.98	5.24	0.00	6.99	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			21.23			6.92			6.99		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	B											
Intersection V/C	0.493											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.72			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.273			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1098			632			632		
d_b, Bicycle Delay [s]	30.05			6.11			14.05			14.05		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.219			2.199		
Bicycle LOS	D			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	128	0	0	0	0	0	0	60	49	0	248	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	213	3	43	0	0	0	0	1117	49	0	1396	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	1	11	0	0	0	0	291	13	0	364	125
Total Analysis Volume [veh/h]	222	3	45	0	0	0	0	1164	51	0	1454	500
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		42	42	42	42
g / C, Green / Cycle	0.17	0.17	0.17		0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.12	0.01	0.01		0.23	0.03	0.28	0.31
s, saturation flow rate [veh/h]	1714	1560	1530		4903	1530	4903	1530
c, Capacity [veh/h]	286	260	255		3435	1072	3435	1072
d1, Uniform Delay [s]	23.88	21.23	21.23		3.50	2.79	3.77	3.93
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.97	0.15	0.15		0.25	0.08	0.36	1.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.09	0.09		0.33	0.05	0.41	0.45
d, Delay for Lane Group [s/veh]	27.84	21.37	21.38		3.75	2.87	4.13	5.29
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.00	0.27	0.27		0.66	0.08	0.89	1.24
50th-Percentile Queue Length [ft/ln]	75.04	6.76	6.66		16.38	2.11	22.25	30.98
95th-Percentile Queue Length [veh/ln]	5.40	0.49	0.48		1.18	0.15	1.60	2.23
95th-Percentile Queue Length [ft/ln]	135.07	12.17	11.99		29.49	3.79	40.05	55.76

Movement, Approach, & Intersection Results

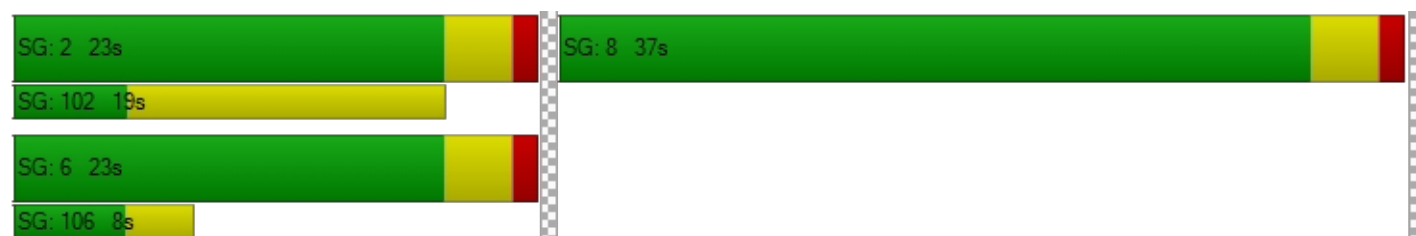
d_M, Delay for Movement [s/veh]	27.84	21.37	21.37	0.00	0.00	0.00	0.00	3.75	2.87	0.00	4.13	5.29
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	26.69			0.00			3.71			4.43		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	5.92											
Intersection LOS	A											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.187	1.875	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	1.987	4.132	2.201	2.591
Bicycle LOS	A	D	B	B

Sequence

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



Intersection Level Of Service Report**Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.5
A
0.001

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	0	0	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.51	8.31	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.6
A
0.006

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	1	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	1	1	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6
Total Analysis Volume [veh/h]	6	0	0	1	1	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.37	7.24	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.8
A
0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	0	0	7	23	45
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	0	7	23	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	2	6	12
Total Analysis Volume [veh/h]	19	0	0	7	24	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.57	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.43	1.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.71					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 3 Opening Year (2024) With Project PM Peak Hour

Report File: C:\...\PMOYW.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.044	19.0	C
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.008	14.5	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.834	30.0	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.686	13.2	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.687	13.0	B
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	WB Thru	0.000	0.0	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.015	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.035	8.8	A

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

Intersection Level Of Service Report**Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)**

Control Type:	Two-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.044

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	10	7	7	12	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	471	441	7	12	37
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	129	120	2	3	10
Total Analysis Volume [veh/h]	30	515	482	8	13	40
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.04	0.06
d_M, Delay for Movement [s/veh]	8.24	0.00	0.00	0.00	19.01	11.71
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.35	0.35
95th-Percentile Queue Length [ft/ln]	1.14	1.14	0.00	0.00	8.66	8.66
d_A, Approach Delay [s/veh]	0.45		0.00		13.50	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.89					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	49	2	0	68	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	69	301	9	80	351
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	18	80	2	21	94
Total Analysis Volume [veh/h]	3	74	322	10	85	375
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.08	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	14.48	9.50	0.00	0.00	7.95	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.26	0.00	0.00	0.14	0.07
95th-Percentile Queue Length [ft/ln]	0.59	6.46	0.00	0.00	3.49	1.74
d_A, Approach Delay [s/veh]	9.70		0.00		1.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.64					
Intersection LOS	B					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.834

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	66	0	2	2	402	0	0	267	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	59	251	312	87	18	50	1411	19	307	1423	249
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	65	80	22	5	13	363	5	79	366	64
Total Analysis Volume [veh/h]	33	61	258	321	90	19	51	1452	20	316	1464	256
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	39	48	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	7	34	34	20	47	47
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.08	0.36	0.36	0.21	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.29	0.06	0.03	0.30	0.01	0.19	0.33	0.33
s, saturation flow rate [veh/h]	1309	1800	1530	1086	1747	1619	4631	1445	1619	3427	1667
c, Capacity [veh/h]	392	550	467	361	533	127	1646	514	345	1681	818
d1, Uniform Delay [s]	28.05	23.74	27.47	36.14	24.43	41.72	28.42	20.02	36.36	18.36	18.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.97	6.67	0.18	2.01	6.39	0.13	8.74	2.14	4.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.11	0.54	0.86	0.20	0.40	0.86	0.04	0.89	0.67	0.67
d, Delay for Lane Group [s/veh]	28.14	23.82	28.43	42.81	24.61	43.72	34.81	20.16	45.09	20.50	22.95
Lane Group LOS	C	C	C	D	C	D	C	C	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.57	0.96	4.77	7.93	1.75	1.13	9.91	0.27	7.28	8.54	8.96
50th-Percentile Queue Length [ft/ln]	14.30	23.91	119.21	198.26	43.85	28.29	247.84	6.84	181.98	213.62	224.01
95th-Percentile Queue Length [veh/ln]	1.03	1.72	8.35	12.55	3.16	2.04	15.08	0.49	11.70	13.34	13.87
95th-Percentile Queue Length [ft/ln]	25.74	43.03	208.74	313.72	78.93	50.92	376.94	12.31	292.60	333.47	346.74

Movement, Approach, & Intersection Results

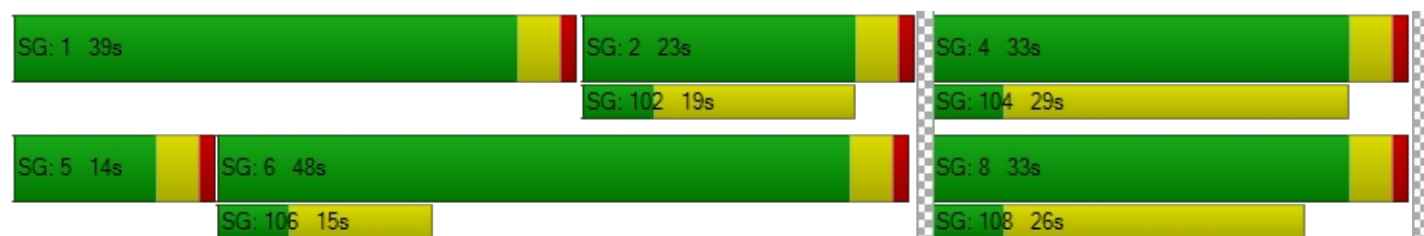
d_M, Delay for Movement [s/veh]	28.14	23.82	28.43	42.81	24.61	24.61	43.72	34.81	20.16	45.09	21.02	22.95
Movement LOS	C	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.61			38.23			34.93			25.00		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	30.00											
Intersection LOS	C											
Intersection V/C	0.834											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	38.96			38.96			38.96			38.96		
I_p,int, Pedestrian LOS Score for Intersection	2.319			2.196			3.375			3.960		
Crosswalk LOS	B			B			C			D		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	610			610			400			926		
d_b, Bicycle Delay [s]	22.96			22.96			30.44			13.72		
I_b,int, Bicycle LOS Score for Intersection	2.124			2.248			2.374			2.648		
Bicycle LOS	B			B			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

13.2
B
0.686

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	90	0	360	108	0	224	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	461	0	455	0	1683	108	0	1528	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	118	0	116	0	429	28	0	390	0
Total Analysis Volume [veh/h]	0	0	0	470	0	464	0	1717	110	0	1559	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	31	31	31	31
g / C, Green / Cycle		0.35	0.35	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.16	0.30	0.34	0.07	0.31	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		1042	539	2525	788	2525	788
d1, Uniform Delay [s]		14.95	17.96	10.77	7.61	10.27	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.30	3.88	1.42	0.36	1.09	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.44	0.84	0.67	0.14	0.61	0.00
d, Delay for Lane Group [s/veh]		15.24	21.84	12.19	7.97	11.36	0.00
Lane Group LOS		B	C	B	A	B	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.21	5.72	4.00	0.58	4.10	0.00
50th-Percentile Queue Length [ft/ln]		55.23	142.97	99.96	14.45	102.57	0.00
95th-Percentile Queue Length [veh/ln]		3.98	9.64	7.20	1.04	7.39	0.00
95th-Percentile Queue Length [ft/ln]		99.42	241.01	179.92	26.01	184.63	0.00

Movement, Approach, & Intersection Results

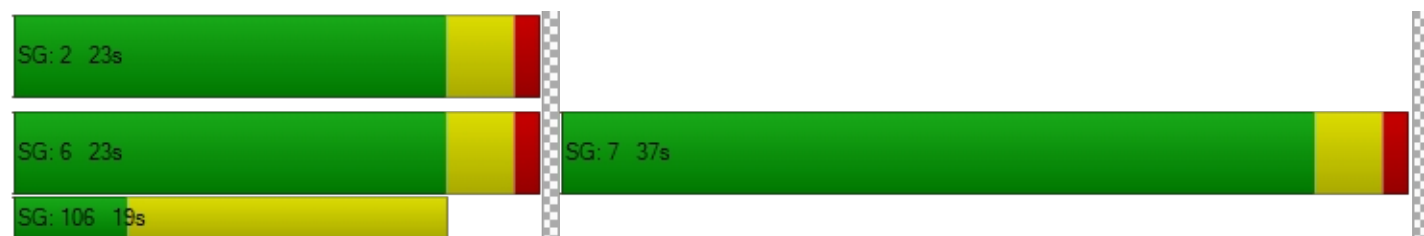
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.24	0.00	21.84	0.00	12.19	7.97	0.00	11.36	0.00
Movement LOS				B		C		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			18.52			11.93			11.36		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.15											
Intersection LOS	B											
Intersection V/C	0.686											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.70			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.335			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1099			633			633		
d_b, Bicycle Delay [s]	30.03			6.09			14.03			14.03		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.545			2.400		
Bicycle LOS	D			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.687

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	74	0	0	0	0	0	0	225	135	0	150	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	272	4	803	0	0	0	0	1731	135	0	1741	420
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	1	206	0	0	0	0	445	35	0	447	108
Total Analysis Volume [veh/h]	280	4	825	0	0	0	0	1779	139	0	1789	432
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		33	33	33	33
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26		0.35	0.09	0.36	0.27
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	561	501	500		2648	826	2648	826
d1, Uniform Delay [s]	16.20	18.50	18.51		9.84	6.98	9.87	8.78
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	3.18	3.21		1.28	0.43	1.30	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.81	0.81		0.65	0.16	0.66	0.51
d, Delay for Lane Group [s/veh]	16.85	21.68	21.72		11.12	7.41	11.18	11.02
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.81	5.03	5.03		3.77	0.67	3.80	2.76
50th-Percentile Queue Length [ft/ln]	70.18	125.65	125.80		94.17	16.77	95.08	68.92
95th-Percentile Queue Length [veh/ln]	5.05	8.70	8.71		6.78	1.21	6.85	4.96
95th-Percentile Queue Length [ft/ln]	126.33	217.57	217.77		169.51	30.19	171.14	124.06

Movement, Approach, & Intersection Results

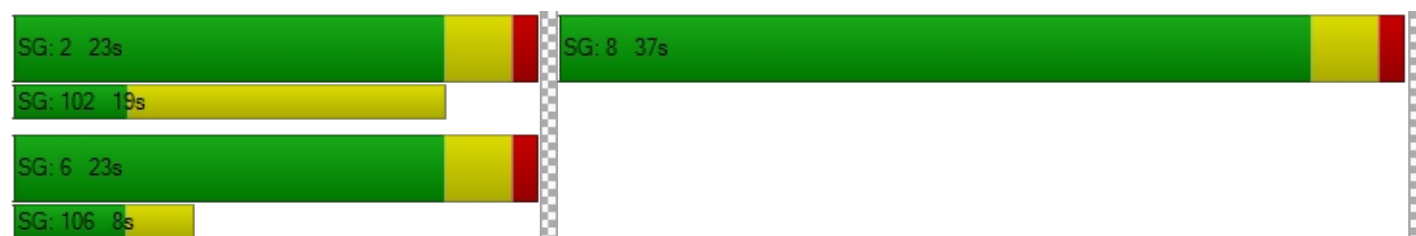
d_M, Delay for Movement [s/veh]	16.85	21.68	21.70	0.00	0.00	0.00	0.00	11.12	7.41	0.00	11.18	11.02
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.48			0.00			10.86			11.15		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.687											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.408	1.818	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	3.340	4.132	2.586	2.748
Bicycle LOS	C	D	B	B

Sequence

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



Intersection Level Of Service Report**Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Southbound		Eastbound		Westbound	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Southbound		Eastbound		Westbound	
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	1	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.6
A
0.015

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	0	0	1	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	3
Total Analysis Volume [veh/h]	16	0	0	0	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.38	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.12	1.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.8
A
0.035

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	16	12	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	0	16	13	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	4	3	6
Total Analysis Volume [veh/h]	36	0	0	17	14	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.53	7.26	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 4 General Plan Buildout Without Project AM Peak Hour

Report File: C:\...\AM40WO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.006	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.052	9.0	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.715	24.9	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.446	8.8	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.546	8.1	A

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

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Northbound		Southbound		Eastbound	
Approach	←		→		↔	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	240	620	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	240	620	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	63	163	0	0	0
Total Analysis Volume [veh/h]	0	253	653	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	15.94	12.32
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		14.13	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.052

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	49	179	17	403	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	49	179	17	403	154
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	47	4	106	41
Total Analysis Volume [veh/h]	0	52	188	18	424	162
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.00	0.00	0.29	0.00
d_M, Delay for Movement [s/veh]	28.58	9.02	0.00	0.00	8.17	0.00
Movement LOS	D	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.86	0.43
95th-Percentile Queue Length [ft/ln]	0.00	4.10	0.00	0.00	21.61	10.80
d_A, Approach Delay [s/veh]	9.02		0.00		5.91	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.66					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.715

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	115	19	16	19	268	2	56	241	85
Total Analysis Volume [veh/h]	5	24	113	459	77	63	78	1073	9	223	964	340
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	24	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	27	27	12	31	31
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.34	0.34	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.34	0.08	0.04	0.20	0.01	0.12	0.23	0.23
s, saturation flow rate [veh/h]	1277	1900	1615	1280	1760	1714	5176	1615	1714	3618	1657
c, Capacity [veh/h]	456	689	585	515	638	175	1754	547	255	1396	639
d1, Uniform Delay [s]	20.45	16.49	17.45	27.11	17.63	33.78	21.81	17.61	33.12	19.76	19.76
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.02	0.15	4.12	0.16	1.63	1.42	0.05	7.27	2.00	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.18	0.85	0.21	0.42	0.58	0.02	0.83	0.61	0.61
d, Delay for Lane Group [s/veh]	20.46	16.51	17.60	31.24	17.79	35.40	23.23	17.67	40.40	21.76	24.11
Lane Group LOS	C	B	B	C	B	D	C	B	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.27	1.32	8.51	1.65	1.33	4.84	0.11	4.18	5.86	5.79
50th-Percentile Queue Length [ft/ln]	1.66	6.67	32.97	212.71	41.35	33.29	121.03	2.68	104.54	146.58	144.75
95th-Percentile Queue Length [veh/ln]	0.12	0.48	2.37	13.29	2.98	2.40	8.45	0.19	7.53	9.83	9.74
95th-Percentile Queue Length [ft/ln]	2.98	12.00	59.34	332.30	74.42	59.92	211.24	4.82	188.18	245.86	243.41

Movement, Approach, & Intersection Results

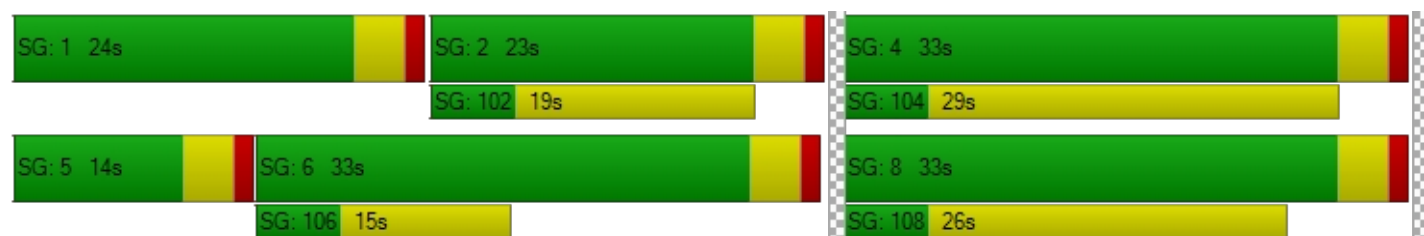
d_M, Delay for Movement [s/veh]	20.46	16.51	17.60	31.24	17.79	17.79	35.40	23.23	17.67	40.40	21.93	24.11
Movement LOS	C	B	B	C	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	17.52			28.09			24.00			25.11		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.94											
Intersection LOS	C											
Intersection V/C	0.715											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	31.55			31.55			31.55			31.55		
I_p,int, Pedestrian LOS Score for Intersection	2.231			2.257			3.151			3.909		
Crosswalk LOS	B			B			C			D		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	724			724			475			724		
d_b, Bicycle Delay [s]	16.29			16.29			23.29			16.29		
I_b,int, Bicycle LOS Score for Intersection	1.782			2.498			2.166			2.358		
Bicycle LOS	A			B			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 8.8
Level Of Service: A
Volume to Capacity (v/c): 0.446

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	339	0	274	0	1152	168	0	1276	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	339	0	274	0	1152	0	0	1276	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	72	0	303	0	0	336	0
Total Analysis Volume [veh/h]	0	0	0	357	0	288	0	1213	0	0	1343	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		13	13	39	39	39	39
g / C, Green / Cycle		0.22	0.22	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.10	0.17	0.22	0.00	0.25	0.00
s, saturation flow rate [veh/h]		3329	1615	5176	1615	5176	1615
c, Capacity [veh/h]		745	361	3330	1039	3330	1039
d1, Uniform Delay [s]		20.20	21.85	4.92	0.00	5.08	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.44	3.35	0.29	0.00	0.34	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.46	0.76	0.35	0.00	0.38	0.00
d, Delay for Lane Group [s/veh]		20.63	25.20	5.21	0.00	5.42	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.95	3.67	1.15	0.00	1.83	0.00
50th-Percentile Queue Length [ft/ln]		48.76	91.70	28.68	0.00	45.67	0.00
95th-Percentile Queue Length [veh/ln]		3.51	6.60	2.07	0.00	3.29	0.00
95th-Percentile Queue Length [ft/ln]		87.77	165.06	51.63	0.00	82.21	0.00

Movement, Approach, & Intersection Results

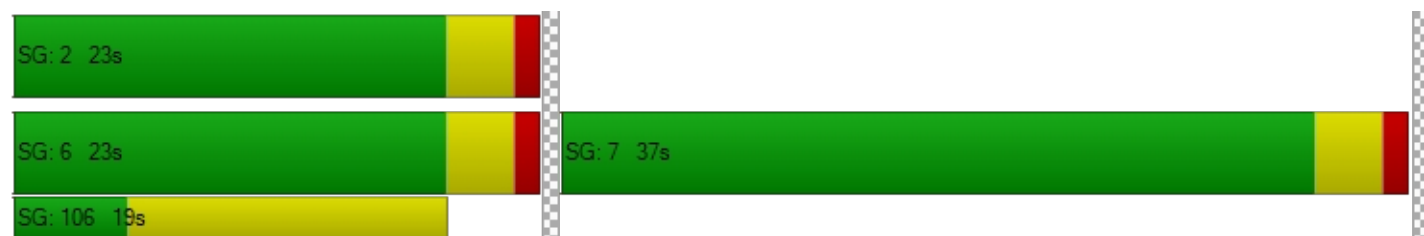
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.63	0.00	25.20	0.00	5.21	0.00	0.00	5.42	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			22.67			5.21			5.42		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.82											
Intersection LOS	A											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.72			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.261			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1098			632			632		
d_b, Bicycle Delay [s]	30.05			6.11			14.05			14.05		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.193			2.261		
Bicycle LOS	D			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 8.1
Level Of Service: A
Volume to Capacity (v/c): 0.546

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵						↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	137	4	452	0	0	0	0	1189	333	0	1583	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	4	452	0	0	0	0	1189	0	0	1583	566
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	1	119	0	0	0	0	313	0	0	417	149
Total Analysis Volume [veh/h]	144	4	476	0	0	0	0	1252	0	0	1666	596
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12		40	40	40	40
g / C, Green / Cycle	0.19	0.19	0.19		0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.08	0.14	0.14		0.23	0.00	0.31	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	333	315	314		3482	1086	3482	1086
d1, Uniform Delay [s]	21.23	22.74	22.74		4.19	0.00	4.64	4.96
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	3.24	3.25		0.27	0.00	0.43	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.73	0.73		0.34	0.00	0.45	0.52
d, Delay for Lane Group [s/veh]	22.05	25.99	26.00		4.45	0.00	5.07	6.76
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.65	3.10	3.09		0.94	0.00	1.40	1.98
50th-Percentile Queue Length [ft/ln]	41.29	77.42	77.24		23.44	0.00	34.91	49.61
95th-Percentile Queue Length [veh/ln]	2.97	5.57	5.56		1.69	0.00	2.51	3.57
95th-Percentile Queue Length [ft/ln]	74.32	139.35	139.04		42.20	0.00	62.85	89.29

Movement, Approach, & Intersection Results

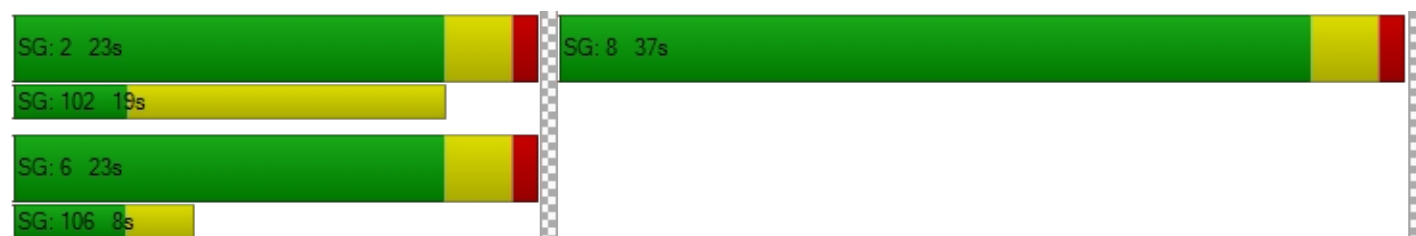
d_M, Delay for Movement [s/veh]	22.05	25.99	25.99	0.00	0.00	0.00	0.00	4.45	0.00	0.00	5.07	6.76
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	25.08			0.00			4.45			5.52		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	8.15											
Intersection LOS	A											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.256	1.960	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	2.538	4.132	2.214	2.742
Bicycle LOS	B	D	B	B

Sequence

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



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 4 General Plan Buildout Without Project PM Peak
Hour

Report File: C:\...\PM40WO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.4	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.050	15.5	C
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	1.036	160.2	F
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.668	12.2	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.729	13.5	B

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

Intersection Level Of Service Report**Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.4
A
0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	810	500	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	810	500	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	213	132	0	0	0
Total Analysis Volume [veh/h]	1	853	526	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.35	0.00	0.00	0.00	25.41	11.26
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.01		0.00		18.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.050

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	352	328	21	79	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	352	328	21	79	369
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	93	86	6	21	97
Total Analysis Volume [veh/h]	19	371	345	22	83	388
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.42	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	15.51	12.29	0.00	0.00	8.04	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	2.12	0.00	0.00	0.14	0.07
95th-Percentile Queue Length [ft/ln]	3.94	53.10	0.00	0.00	3.44	1.72
d_A, Approach Delay [s/veh]	12.45		0.00		1.42	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.49					
Intersection LOS	C					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

160.2
F
1.036

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	145	37	8	38	335	5	86	322	141
Total Analysis Volume [veh/h]	36	127	279	580	146	34	151	1341	21	342	1286	564
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	57	0	0	57	0	14	29	0	24	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	53	53	53	53	53	10	25	25	20	35	35
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.09	0.23	0.23	0.18	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.16	0.54	0.09	0.08	0.25	0.01	0.19	0.33	0.34
s, saturation flow rate [veh/h]	1233	1900	1615	1013	1839	1714	5176	1615	1714	3618	1623
c, Capacity [veh/h]	572	914	777	501	885	157	1178	368	313	1151	517
d1, Uniform Delay [s]	19.66	15.85	17.75	34.55	16.36	49.63	42.59	33.31	45.09	37.60	37.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.06	0.26	189.69	0.11	21.87	164.68	0.28	95.96	108.70	172.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.13	0.34	1.10	0.19	0.91	1.08	0.05	1.04	1.05	1.07
d, Delay for Lane Group [s/veh]	19.71	15.91	18.01	224.24	16.46	71.50	207.27	33.59	141.05	146.29	209.76
Lane Group LOS	B	B	B	F	B	E	F	C	F	F	F
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.54	1.69	4.17	40.24	2.47	4.70	28.05	0.43	16.45	31.79	37.63
50th-Percentile Queue Length [ft/ln]	13.39	42.34	104.26	1006.07	61.82	117.52	701.29	10.77	411.17	794.66	940.75
95th-Percentile Queue Length [veh/ln]	0.96	3.05	7.51	54.55	4.45	8.26	38.49	0.78	23.58	42.31	50.08
95th-Percentile Queue Length [ft/ln]	24.11	76.21	187.66	1363.75	111.27	206.41	962.13	19.38	589.57	1057.71	1252.11

Movement, Approach, & Intersection Results

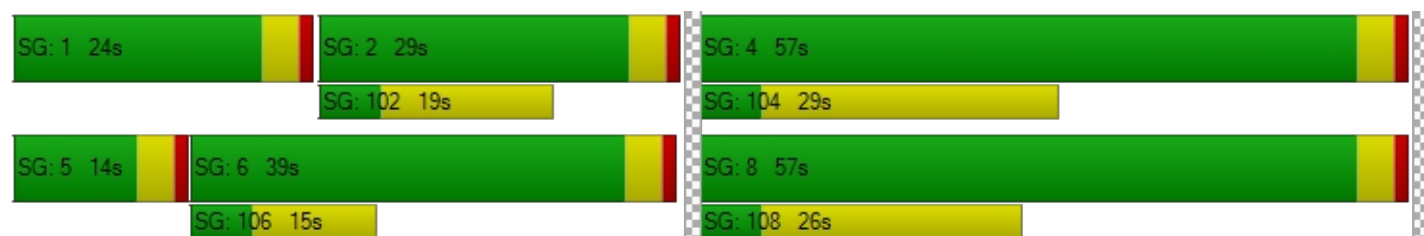
d_M, Delay for Movement [s/veh]	19.71	15.91	18.01	224.24	16.46	16.46	71.50	207.27	33.59	141.05	147.26	209.76
Movement LOS	B	B	B	F	B	B	E	F	C	F	F	F
d_A, Approach Delay [s/veh]	17.54			175.03			191.34			162.38		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	160.22											
Intersection LOS	F											
Intersection V/C	1.036											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	46.44			46.44			46.44			46.44		
I_p,int, Pedestrian LOS Score for Intersection	2.363			2.446			3.339			4.358		
Crosswalk LOS	B			B			C			E		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	962			962			454			636		
d_b, Bicycle Delay [s]	14.82			14.82			32.91			25.63		
I_b,int, Bicycle LOS Score for Intersection	2.253			2.751			2.350			2.705		
Bicycle LOS	B			C			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

12.2
B
0.668

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	496	0	423	0	1874	196	0	1378	460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	496	0	423	0	1874	0	0	1378	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	131	0	111	0	493	0	0	363	0
Total Analysis Volume [veh/h]	0	0	0	522	0	445	0	1973	0	0	1451	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	19	33	33	33	33
g / C, Green / Cycle		0.32	0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate		0.16	0.26	0.36	0.00	0.27	0.00
s, saturation flow rate [veh/h]		3144	1615	5176	1615	5176	1615
c, Capacity [veh/h]		1010	519	2825	882	2825	882
d1, Uniform Delay [s]		16.46	18.79	9.73	0.00	8.46	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.37	3.28	1.25	0.00	0.61	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.82	0.66	0.00	0.49	0.00
d, Delay for Lane Group [s/veh]		16.84	22.06	10.98	0.00	9.07	0.00
Lane Group LOS		B	C	B	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.54	5.32	4.02	0.00	3.09	0.00
50th-Percentile Queue Length [ft/ln]		63.62	133.10	100.59	0.00	77.25	0.00
95th-Percentile Queue Length [veh/ln]		4.58	9.11	7.24	0.00	5.56	0.00
95th-Percentile Queue Length [ft/ln]		114.52	227.71	181.06	0.00	139.05	0.00

Movement, Approach, & Intersection Results

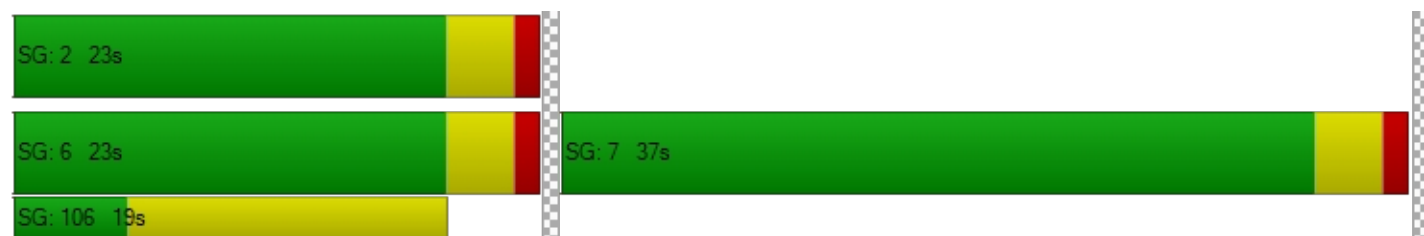
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.84	0.00	22.06	0.00	10.98	0.00	0.00	9.07	0.00
Movement LOS				B		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			19.24			10.98			9.07		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.17											
Intersection LOS	B											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.336	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.590	2.318
Bicycle LOS	D	A	B	B

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 13.5
Level Of Service: B
Volume to Capacity (v/c): 0.729

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	245	7	849	0	0	0	0	2024	248	0	1682	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	7	849	0	0	0	0	2024	0	0	1682	573
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	2	223	0	0	0	0	533	0	0	443	151
Total Analysis Volume [veh/h]	258	7	894	0	0	0	0	2131	0	0	1771	603
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		32	32	32	32
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.26	0.27		0.39	0.00	0.32	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	564	533	531		2785	869	2785	869
d1, Uniform Delay [s]	15.81	18.42	18.43		10.55	0.00	9.52	9.96
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	2.96	3.00		1.71	0.00	0.98	3.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.80	0.81		0.73	0.00	0.60	0.66
d, Delay for Lane Group [s/veh]	16.34	21.38	21.44		12.26	0.00	10.50	13.94
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.47	5.29	5.30		4.77	0.00	3.50	4.43
50th-Percentile Queue Length [ft/ln]	61.64	132.18	132.42		119.21	0.00	87.44	110.75
95th-Percentile Queue Length [veh/ln]	4.44	9.06	9.07		8.35	0.00	6.30	7.88
95th-Percentile Queue Length [ft/ln]	110.95	226.45	226.78		208.75	0.00	157.39	197.05

Movement, Approach, & Intersection Results

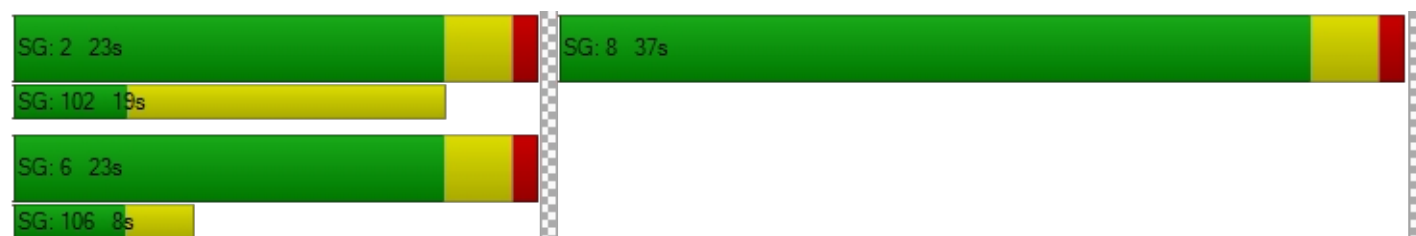
d_M, Delay for Movement [s/veh]	16.34	21.38	21.41	0.00	0.00	0.00	0.00	12.26	0.00	0.00	10.50	13.94
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.28			0.00			12.26			11.38		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.53											
Intersection LOS	B											
Intersection V/C	0.729											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.380	1.970	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	3.376	4.132	2.673	2.800
Bicycle LOS	C	D	B	C

Sequence

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



GENERAL PLAN BUILDOUT (2040) WITH PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 5 General Plan Buildout With Project AM Peak
Hour

Report File: C:\...\AM40W.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.011	19.2	C
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.108	9.3	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.733	25.6	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.463	9.0	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.546	8.2	A
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.001	8.5	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.006	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.019	8.8	A

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

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Northbound		Southbound		Eastbound	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↰		↱		↻	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	0	240	620	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	0	0	13	3	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	240	620	13	3	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	63	163	3	1	6
Total Analysis Volume [veh/h]	57	253	653	14	3	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.01	0.00	0.01	0.05
d_M, Delay for Movement [s/veh]	8.81	0.00	0.00	0.00	19.17	12.87
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	2.32	2.32	0.00	0.00	4.49	4.49
d_A, Approach Delay [s/veh]	1.62		0.00		13.63	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.86					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	49	179	17	403	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	53	1	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	102	180	17	425	154
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	27	47	4	112	41
Total Analysis Volume [veh/h]	0	107	189	18	447	162
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.11	0.00	0.00	0.31	0.00
d_M, Delay for Movement [s/veh]	30.83	9.27	0.00	0.00	8.21	0.00
Movement LOS	D	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.36	0.00	0.00	0.93	0.46
95th-Percentile Queue Length [ft/ln]	0.00	9.07	0.00	0.00	23.15	11.58
d_A, Approach Delay [s/veh]	9.27		0.00		6.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.05					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 3: Key Pointe Dr (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

25.6
C
0.733

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	22	0	0	2	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	458	73	60	76	1019	9	212	916	374
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	121	19	16	20	268	2	56	241	98
Total Analysis Volume [veh/h]	5	24	113	482	77	63	80	1073	9	223	964	394
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	24	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	27	27	12	31	31
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.34	0.34	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.36	0.08	0.04	0.20	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1277	1900	1615	1280	1760	1714	5176	1615	1714	3618	1631
c, Capacity [veh/h]	456	689	585	515	638	177	1754	547	255	1392	628
d1, Uniform Delay [s]	20.45	16.49	17.45	27.74	17.63	33.74	21.81	17.61	33.12	20.11	20.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.02	0.15	5.93	0.16	1.66	1.42	0.05	7.27	2.28	5.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.18	0.89	0.21	0.43	0.58	0.02	0.83	0.64	0.64
d, Delay for Lane Group [s/veh]	20.46	16.51	17.60	33.66	17.79	35.40	23.23	17.67	40.40	22.39	25.14
Lane Group LOS	C	B	B	C	B	D	C	B	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.27	1.32	9.39	1.65	1.37	4.84	0.11	4.18	6.27	6.13
50th-Percentile Queue Length [ft/ln]	1.66	6.67	32.97	234.70	41.35	34.18	121.03	2.68	104.54	156.63	153.29
95th-Percentile Queue Length [veh/ln]	0.12	0.48	2.37	14.41	2.98	2.46	8.45	0.19	7.53	10.37	10.19
95th-Percentile Queue Length [ft/ln]	2.98	12.00	59.34	360.33	74.42	61.53	211.24	4.82	188.18	259.25	254.81

Movement, Approach, & Intersection Results

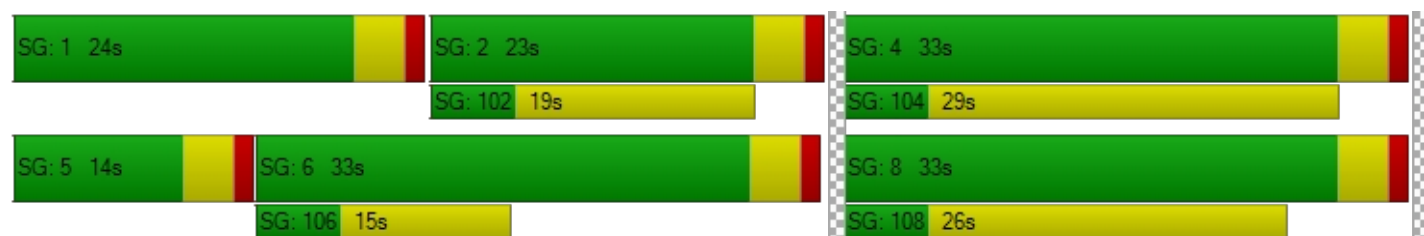
d_M, Delay for Movement [s/veh]	20.46	16.51	17.60	33.66	17.79	17.79	35.40	23.23	17.67	40.40	22.47	25.14
Movement LOS	C	B	B	C	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	17.52			30.09			24.02			25.66		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	25.57											
Intersection LOS	C											
Intersection V/C	0.733											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	31.55			31.55			31.55			31.55		
I_p,int, Pedestrian LOS Score for Intersection	2.231			2.282			3.152			3.958		
Crosswalk LOS	B			B			C			D		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	724			724			475			724		
d_b, Bicycle Delay [s]	16.29			16.29			23.29			16.29		
I_b,int, Bicycle LOS Score for Intersection	1.782			2.535			2.167			2.386		
Bicycle LOS	A			B			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 9.0
Level Of Service: A
Volume to Capacity (v/c): 0.463

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶↶↶			↶			↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	339	0	274	0	1152	168	0	1276	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	15	0	13	9	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	339	0	289	0	1165	9	0	1312	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	76	0	307	2	0	345	0
Total Analysis Volume [veh/h]	0	0	0	357	0	304	0	1226	9	0	1381	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		14	14	38	38	38	38
g / C, Green / Cycle		0.23	0.23	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.10	0.18	0.23	0.01	0.25	0.00
s, saturation flow rate [veh/h]		3329	1615	5176	1615	5176	1615
c, Capacity [veh/h]		776	376	3282	1024	3282	1024
d1, Uniform Delay [s]		19.72	21.57	5.20	4.05	5.40	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.39	3.40	0.30	0.02	0.37	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.44	0.77	0.35	0.01	0.40	0.00
d, Delay for Lane Group [s/veh]		20.11	24.96	5.50	4.07	5.76	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.92	3.85	1.24	0.03	1.99	0.00
50th-Percentile Queue Length [ft/ln]		47.95	96.35	31.10	0.63	49.76	0.00
95th-Percentile Queue Length [veh/ln]		3.45	6.94	2.24	0.05	3.58	0.00
95th-Percentile Queue Length [ft/ln]		86.31	173.43	55.98	1.14	89.56	0.00

Movement, Approach, & Intersection Results

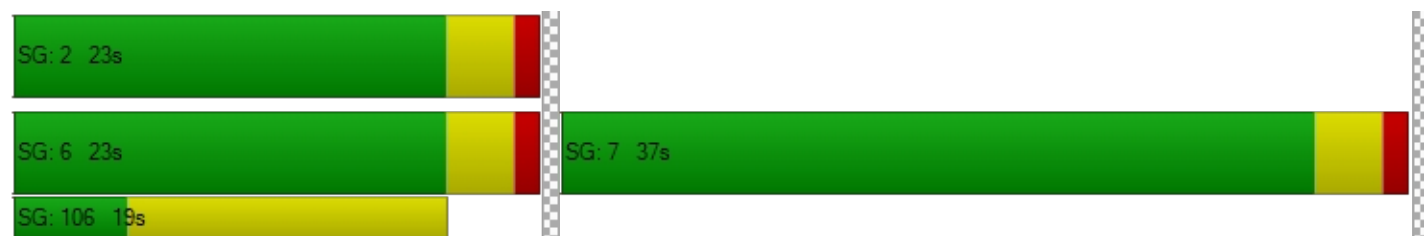
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.11	0.00	24.96	0.00	5.50	4.07	0.00	5.76	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			22.34			5.49			5.76		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.00											
Intersection LOS	A											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			21.72			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.265			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	0			1098			632			632		
d_b, Bicycle Delay [s]	30.05			6.11			14.05			14.05		
I_b,int, Bicycle LOS Score for Intersection	4.132			1.560			2.205			2.281		
Bicycle LOS	D			A			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

8.2
A
0.546

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	137	4	452	0	0	0	0	1189	333	0	1583	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	0	0	0	0	0	0	4	9	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	157	4	452	0	0	0	0	1193	9	0	1599	566
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	1	119	0	0	0	0	314	2	0	421	149
Total Analysis Volume [veh/h]	165	4	476	0	0	0	0	1256	9	0	1683	596
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12		40	40	40	40
g / C, Green / Cycle	0.19	0.19	0.19		0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.14		0.23	0.01	0.31	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	334	316	315		3478	1085	3478	1085
d1, Uniform Delay [s]	21.47	22.70	22.70		4.21	3.26	4.69	4.99
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.03	3.19	3.20		0.27	0.01	0.44	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.72	0.72		0.34	0.01	0.46	0.52
d, Delay for Lane Group [s/veh]	22.50	25.89	25.90		4.48	3.27	5.13	6.79
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.92	3.09	3.08		0.95	0.02	1.43	2.00
50th-Percentile Queue Length [ft/ln]	48.07	77.24	77.07		23.71	0.48	35.68	49.90
95th-Percentile Queue Length [veh/ln]	3.46	5.56	5.55		1.71	0.03	2.57	3.59
95th-Percentile Queue Length [ft/ln]	86.53	139.03	138.73		42.67	0.87	64.22	89.82

Movement, Approach, & Intersection Results

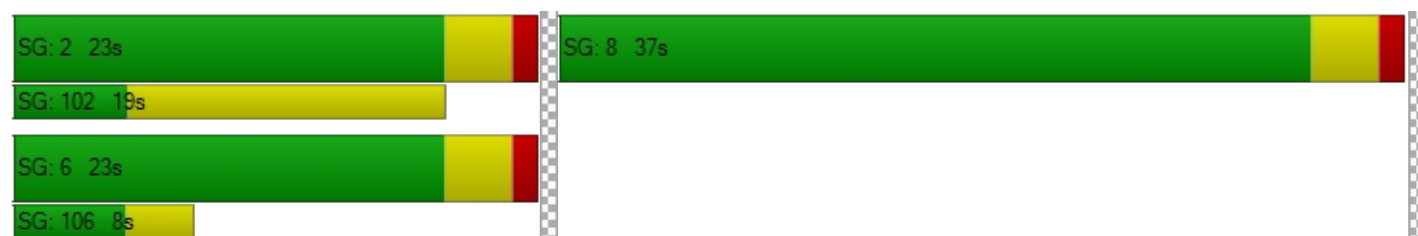
d_M, Delay for Movement [s/veh]	22.50	25.89	25.90	0.00	0.00	0.00	0.00	4.48	3.27	0.00	5.13	6.79
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	25.02			0.00			4.47			5.56		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	8.23											
Intersection LOS	A											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.263	1.960	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	2.571	4.132	2.221	2.750
Bicycle LOS	B	D	B	C

Sequence

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



Intersection Level Of Service Report**Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.5
A
0.001

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	0	0	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.51	8.31	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)**

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Southbound		Eastbound		Westbound	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	1	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	1	1	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6
Total Analysis Volume [veh/h]	6	0	0	1	1	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.37	7.24	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)**

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	0	0	7	23	45
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	0	7	23	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	2	6	12
Total Analysis Volume [veh/h]	19	0	0	7	24	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.57	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.43	1.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.71					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 5 General Plan Buildout With Project PM Peak
Hour

Report File: C:\...\PM40W.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.077	29.8	D
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.058	17.2	C
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	1.063	189.5	F
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.677	12.3	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.732	13.6	B
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	WB Thru	0.000	0.0	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.015	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.035	8.8	A

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

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	29.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.077

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	810	500	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	0	7	12	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	810	500	7	12	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	213	132	2	3	10
Total Analysis Volume [veh/h]	28	853	526	7	13	39
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.08	0.06
d_M, Delay for Movement [s/veh]	8.40	0.00	0.00	0.00	29.79	13.00
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	1.14	1.14	0.00	0.00	12.33	12.33
d_A, Approach Delay [s/veh]	0.27		0.00		17.12	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.058

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	352	328	21	79	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	1	0	36	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	377	329	21	115	370
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	99	87	6	30	97
Total Analysis Volume [veh/h]	19	397	346	22	121	389
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.45	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	17.23	12.69	0.00	0.00	8.09	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	2.40	0.00	0.00	0.20	0.10
95th-Percentile Queue Length [ft/ln]	4.58	59.90	0.00	0.00	5.12	2.56
d_A, Approach Delay [s/veh]	12.90		0.00		1.92	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.90					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	189.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.063

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	35	0	1	1	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	586	139	33	144	1274	20	325	1222	560
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	154	37	9	38	335	5	86	322	147
Total Analysis Volume [veh/h]	36	127	279	617	146	35	152	1341	21	342	1286	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	70	0	0	70	0	14	33	0	27	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	66	66	66	66	66	10	29	29	23	42	42
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.08	0.22	0.22	0.18	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.16	0.58	0.09	0.08	0.25	0.01	0.19	0.34	0.35
s, saturation flow rate [veh/h]	1232	1900	1615	1013	1838	1714	5176	1615	1714	3618	1616
c, Capacity [veh/h]	599	964	819	521	932	133	1156	361	304	1169	522
d1, Uniform Delay [s]	20.89	16.90	18.93	38.39	17.46	60.07	50.58	39.78	53.58	44.09	44.09
k, delay calibration	0.11	0.11	0.11	0.16	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.06	0.23	235.47	0.09	178.64	199.04	0.29	141.41	106.66	174.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.13	0.32	1.13	0.18	1.08	1.10	0.06	1.07	1.04	1.08
d, Delay for Lane Group [s/veh]	20.93	16.96	19.15	273.86	17.55	238.71	249.63	40.07	194.99	150.75	218.87
Lane Group LOS	C	B	B	F	B	F	F	D	F	F	F
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	1.94	4.78	51.38	2.86	10.87	33.36	0.52	21.54	35.16	41.29
50th-Percentile Queue Length [ft/ln]	15.28	48.60	119.55	1284.47	71.40	271.85	833.96	13.03	538.38	879.11	1032.17
95th-Percentile Queue Length [veh/ln]	1.10	3.50	8.37	69.29	5.14	16.76	45.37	0.94	30.20	46.27	54.53
95th-Percentile Queue Length [ft/ln]	27.51	87.47	209.21	1732.26	128.52	418.92	1134.13	23.45	755.09	1156.83	1363.24

Movement, Approach, & Intersection Results

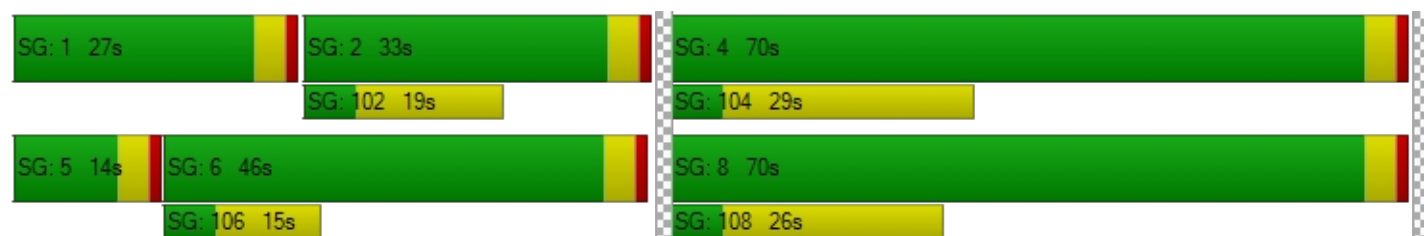
d_M, Delay for Movement [s/veh]	20.93	16.96	19.15	273.86	17.55	17.55	238.71	249.63	40.07	194.99	150.84	218.87
Movement LOS	C	B	B	F	B	B	F	F	D	F	F	F
d_A, Approach Delay [s/veh]	18.66			215.70			245.62			175.73		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	189.46											
Intersection LOS	F											
Intersection V/C	1.063											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	56.38			56.38			56.38			56.38		
I_p,int, Pedestrian LOS Score for Intersection	2.370			2.474			3.347			4.429		
Crosswalk LOS	B			B			C			E		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1014			1014			446			645		
d_b, Bicycle Delay [s]	15.80			15.80			39.30			29.84		
I_b,int, Bicycle LOS Score for Intersection	2.253			2.810			2.351			2.718		
Bicycle LOS	B			C			B			B		

Sequence

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



Intersection Level Of Service Report**Intersection 4: I-15 SB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

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

12.3
B
0.677

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↵↵↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	496	0	423	0	1874	196	0	1378	460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	6	0	22	13	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	496	0	429	0	1896	13	0	1396	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	131	0	113	0	499	3	0	367	0
Total Analysis Volume [veh/h]	0	0	0	522	0	452	0	1996	14	0	1469	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	19	33	33	33	33
g / C, Green / Cycle		0.32	0.32	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate		0.16	0.27	0.37	0.01	0.27	0.00
s, saturation flow rate [veh/h]		3144	1615	5176	1615	5176	1615
c, Capacity [veh/h]		1021	525	2807	876	2807	876
d1, Uniform Delay [s]		16.29	18.68	9.95	6.36	8.64	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.36	3.29	1.33	0.03	0.63	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.82	0.68	0.01	0.50	0.00
d, Delay for Lane Group [s/veh]		16.65	21.98	11.28	6.39	9.27	0.00
Lane Group LOS		B	C	B	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.53	5.39	4.17	0.06	3.19	0.00
50th-Percentile Queue Length [ft/ln]		63.15	134.76	104.25	1.44	79.67	0.00
95th-Percentile Queue Length [veh/ln]		4.55	9.20	7.51	0.10	5.74	0.00
95th-Percentile Queue Length [ft/ln]		113.68	229.96	187.66	2.60	143.41	0.00

Movement, Approach, & Intersection Results

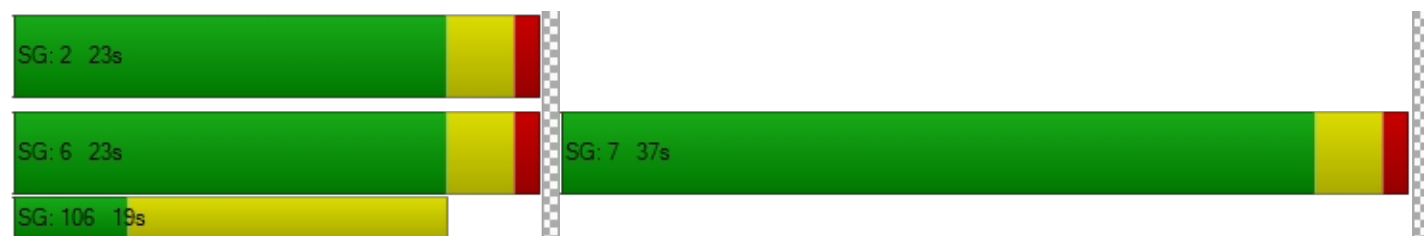
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.65	0.00	21.98	0.00	11.28	6.39	0.00	9.27	0.00
Movement LOS				B		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			19.12			11.25			9.27		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.32											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.337	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.610	2.327
Bicycle LOS	D	A	B	B

Sequence

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



Intersection Level Of Service Report**Intersection 5: I-15 NB Ramps (NS) at Main St (EW)**

Control Type:
Analysis Method:
Analysis Period:

Signalized
HCM 7th Edition
1 hour

Delay (sec / veh): 13.6
Level Of Service: B
Volume to Capacity (v/c): 0.732

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	245	7	849	0	0	0	0	2024	248	0	1682	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	0	0	0	0	0	13	9	0	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	7	849	0	0	0	0	2037	9	0	1691	573
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	2	223	0	0	0	0	536	2	0	445	151
Total Analysis Volume [veh/h]	267	7	894	0	0	0	0	2144	9	0	1780	603
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		32	32	32	32
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.15	0.26	0.27		0.39	0.01	0.33	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	565	533	532		2783	868	2783	868
d1, Uniform Delay [s]	15.89	18.40	18.42		10.61	6.47	9.55	9.97
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	2.94	2.98		1.76	0.02	1.00	3.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.80	0.80		0.73	0.01	0.61	0.66
d, Delay for Lane Group [s/veh]	16.45	21.34	21.40		12.37	6.49	10.55	13.96
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.57	5.28	5.29		4.83	0.04	3.53	4.44
50th-Percentile Queue Length [ft/ln]	64.30	132.05	132.29		120.79	1.02	88.28	110.91
95th-Percentile Queue Length [veh/ln]	4.63	9.05	9.06		8.44	0.07	6.36	7.89
95th-Percentile Queue Length [ft/ln]	115.74	226.28	226.61		210.91	1.83	158.91	197.26

Movement, Approach, & Intersection Results

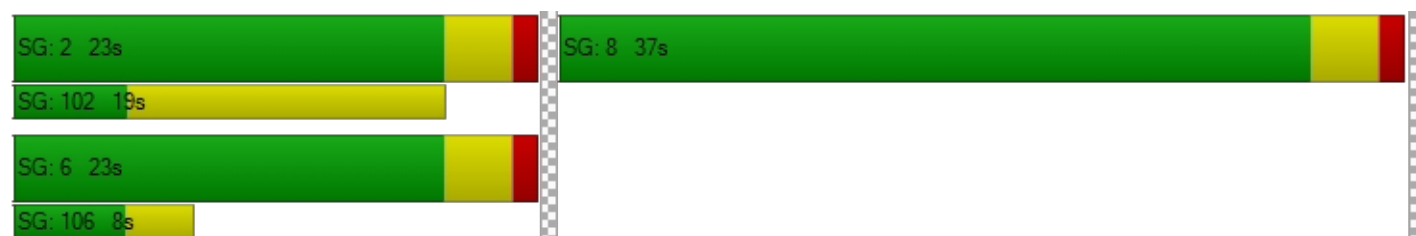
d_M, Delay for Movement [s/veh]	16.45	21.34	21.37	0.00	0.00	0.00	0.00	12.37	6.49	0.00	10.55	13.96
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.25			0.00			12.34			11.42		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.57											
Intersection LOS	B											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.385	1.970	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
I_b,int, Bicycle LOS Score for Intersection	3.391	4.132	2.685	2.805
Bicycle LOS	C	D	B	C

Sequence

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



Intersection Level Of Service Report**Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	1	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.6
A
0.015

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	0	0	1	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	3
Total Analysis Volume [veh/h]	16	0	0	0	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.38	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.12	1.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)**

Control Type:
Analysis Method:
Analysis Period:

Two-way stop
HCM 7th Edition
1 hour

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

8.8
A
0.035

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	16	12	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	0	16	13	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	4	3	6
Total Analysis Volume [veh/h]	36	0	0	17	14	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.53	7.26	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 6 General Plan Buildout With Project AM Peak
Hour - With Improvements

Report File: C:\...\AM40WI.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.584	26.4	C

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

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.584

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	22	0	0	2	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	458	73	60	76	1019	9	212	916	374
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	121	19	16	20	268	2	56	241	98
Total Analysis Volume [veh/h]	5	24	113	482	77	63	80	1073	9	223	964	394
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	30	0	19	35	0	14	23	0	18	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	10	10	15	23	9	37	37	13	41	41
g / C, Green / Cycle	0.01	0.11	0.11	0.17	0.26	0.10	0.41	0.41	0.14	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.15	0.08	0.04	0.20	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1714	1900	1615	3144	1760	1714	5176	1615	1714	3618	1631
c, Capacity [veh/h]	24	204	173	522	456	164	2097	654	248	1643	741
d1, Uniform Delay [s]	43.98	36.40	38.52	36.73	26.79	38.62	19.88	16.05	37.68	17.83	17.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.25	0.24	3.63	5.22	0.35	2.05	0.81	0.04	9.02	1.29	2.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.11	0.62	0.88	0.29	0.46	0.49	0.01	0.86	0.54	0.54
d, Delay for Lane Group [s/veh]	48.23	36.65	42.14	41.95	27.14	40.67	20.69	16.09	46.70	19.12	20.68
Lane Group LOS	D	D	D	D	C	D	C	B	D	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.14	0.47	2.41	5.20	2.30	1.59	4.84	0.11	4.89	6.10	5.83
50th-Percentile Queue Length [ft/ln]	3.44	11.68	60.13	130.09	57.45	39.83	121.01	2.68	122.19	152.51	145.64
95th-Percentile Queue Length [veh/ln]	0.25	0.84	4.33	8.94	4.14	2.87	8.45	0.19	8.51	10.15	9.78
95th-Percentile Queue Length [ft/ln]	6.20	21.02	108.23	223.62	103.41	71.69	211.21	4.82	212.83	253.78	244.60

Movement, Approach, & Intersection Results

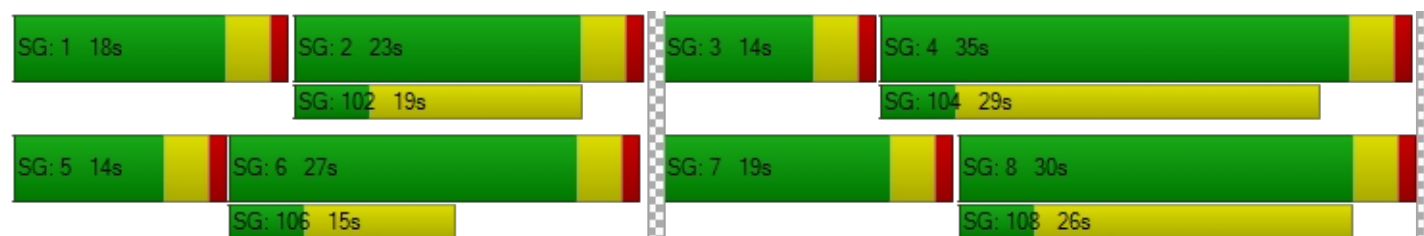
d_M, Delay for Movement [s/veh]	48.23	36.65	42.14	41.95	27.14	27.14	40.67	20.69	16.09	46.70	19.16	20.68
Movement LOS	D	D	D	D	C	C	D	C	B	D	B	C
d_A, Approach Delay [s/veh]	41.43			38.61			22.03			23.43		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	26.39											
Intersection LOS	C											
Intersection V/C	0.584											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	36.50			36.50			36.50			36.50		
I_p,int, Pedestrian LOS Score for Intersection	2.237			2.392			3.151			3.312		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	577			688			422			510		
d_b, Bicycle Delay [s]	22.81			19.39			28.06			24.99		
I_b,int, Bicycle LOS Score for Intersection	1.782			2.535			2.167			2.386		
Bicycle LOS	A			B			B			B		

Sequence

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



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 6 General Plan Buildout With Project PM Peak
Hour - With Improvements

Report File: C:\...\PM40WI.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	0.848	50.1	D

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

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.848

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	35	0	1	1	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	586	139	33	144	1274	20	325	1222	560
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	154	37	9	38	335	5	86	322	147
Total Analysis Volume [veh/h]	36	127	279	617	146	35	152	1341	21	342	1286	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	30	130	0	30	130	0	130	130	0	130	130	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	30	0	25	41	0	15	29	0	26	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	20	20	21	35	11	31	31	22	42	42
g / C, Green / Cycle	0.06	0.18	0.18	0.19	0.32	0.10	0.28	0.28	0.20	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.16	0.19	0.10	0.08	0.25	0.01	0.19	0.34	0.35
s, saturation flow rate [veh/h]	1714	1900	1615	3144	1741	1714	5176	1615	1714	3618	1616
c, Capacity [veh/h]	101	351	298	600	551	172	1445	451	343	1372	613
d1, Uniform Delay [s]	49.74	39.10	43.80	44.34	28.58	48.69	37.96	28.98	43.48	32.04	32.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	0.58	9.88	19.12	0.32	11.32	8.91	0.19	17.17	10.07	27.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.34	0.89	0.98	0.31	0.84	0.88	0.04	0.95	0.89	0.92
d, Delay for Lane Group [s/veh]	51.67	39.68	53.68	63.46	28.90	60.00	46.88	29.16	60.64	42.11	59.88
Lane Group LOS	D	D	D	E	C	E	D	C	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.95	2.91	7.81	9.46	3.49	4.27	11.47	0.39	9.92	15.89	17.71
50th-Percentile Queue Length [ft/ln]	23.81	72.69	195.30	236.60	87.25	106.76	286.67	9.81	248.11	397.28	442.86
95th-Percentile Queue Length [veh/ln]	1.71	5.23	12.40	14.51	6.28	7.66	17.02	0.71	15.09	22.43	24.62
95th-Percentile Queue Length [ft/ln]	42.86	130.84	309.90	362.73	157.05	191.49	425.50	17.66	377.27	560.73	615.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.67	39.68	53.68	63.46	28.90	28.90	60.00	46.88	29.16	60.64	42.13	59.88
Movement LOS	D	D	D	E	C	C	E	D	C	E	D	E
d_A, Approach Delay [s/veh]	49.48			55.62			47.95			49.70		
Approach LOS	D			E			D			D		
d_I, Intersection Delay [s/veh]	50.10											
Intersection LOS	D											
Intersection V/C	0.848											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.41	46.41	46.41	46.41
I_p,int, Pedestrian LOS Score for Intersection	2.363	2.528	3.291	3.588
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	472	672	454	654
d_b, Bicycle Delay [s]	32.11	24.26	32.88	24.93
I_b,int, Bicycle LOS Score for Intersection	2.253	2.810	2.351	2.718
Bicycle LOS	B	C	B	B

Sequence

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



APPENDIX F

SBTAM MODEL PLOTS

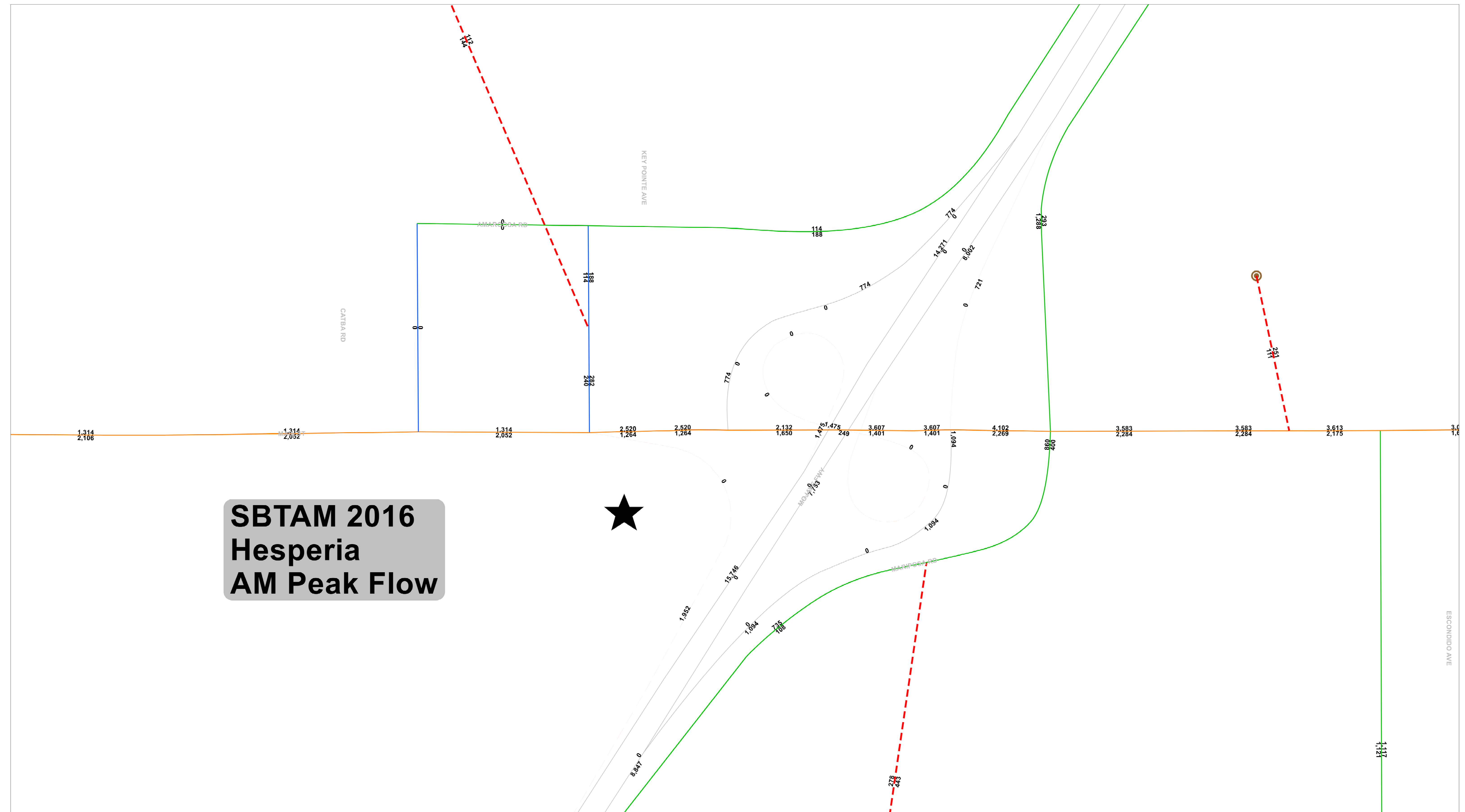
**SBTAM 2016
Hesperia
Average Daily Flow**



WEST POINT RD

COTTON RD

RECONSTRUCTION AVE



**SBTAM 2016
Hesperia
PM Peak Flow**



WEST POINT RD

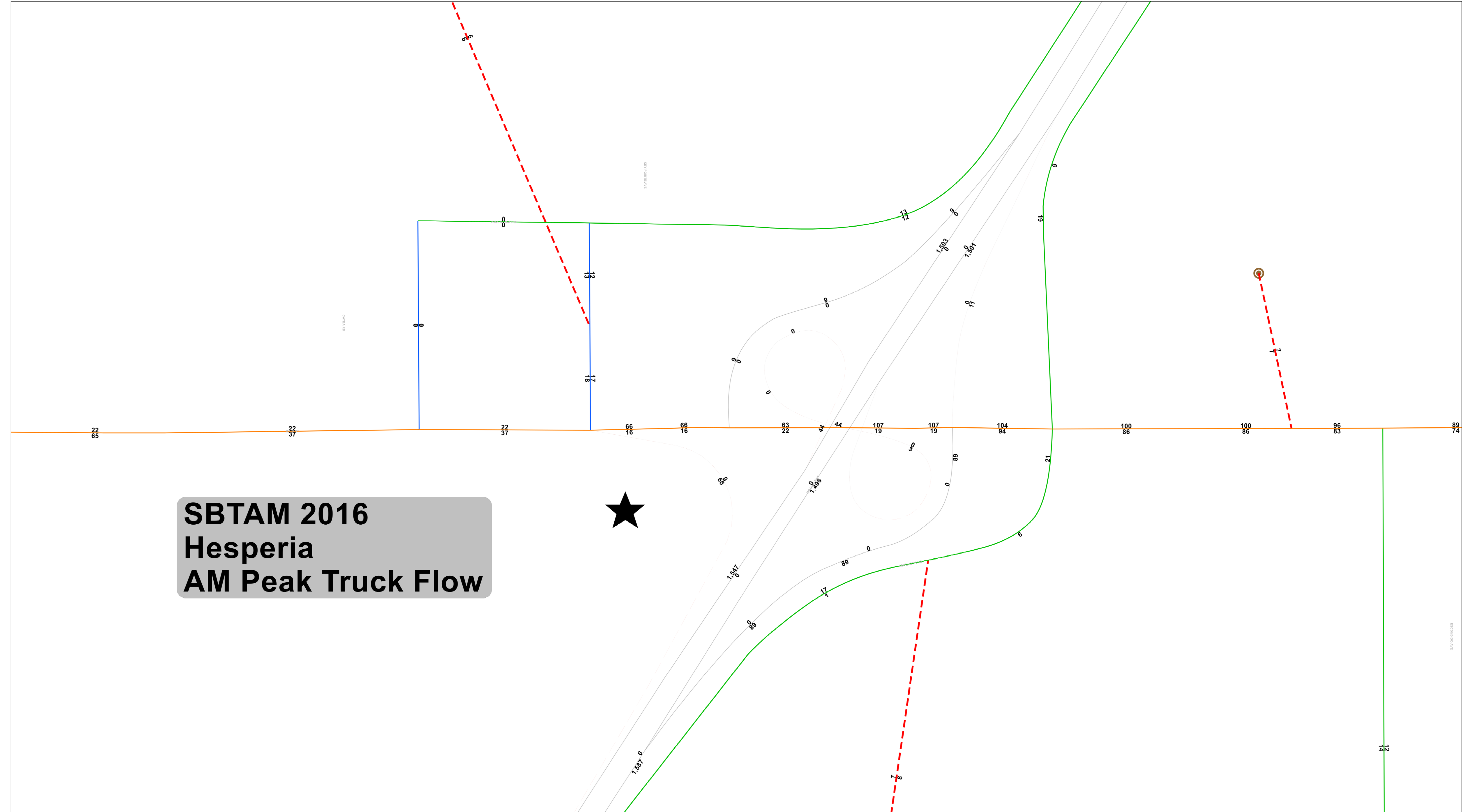
COTEAU RD

REEDWOOD AVE

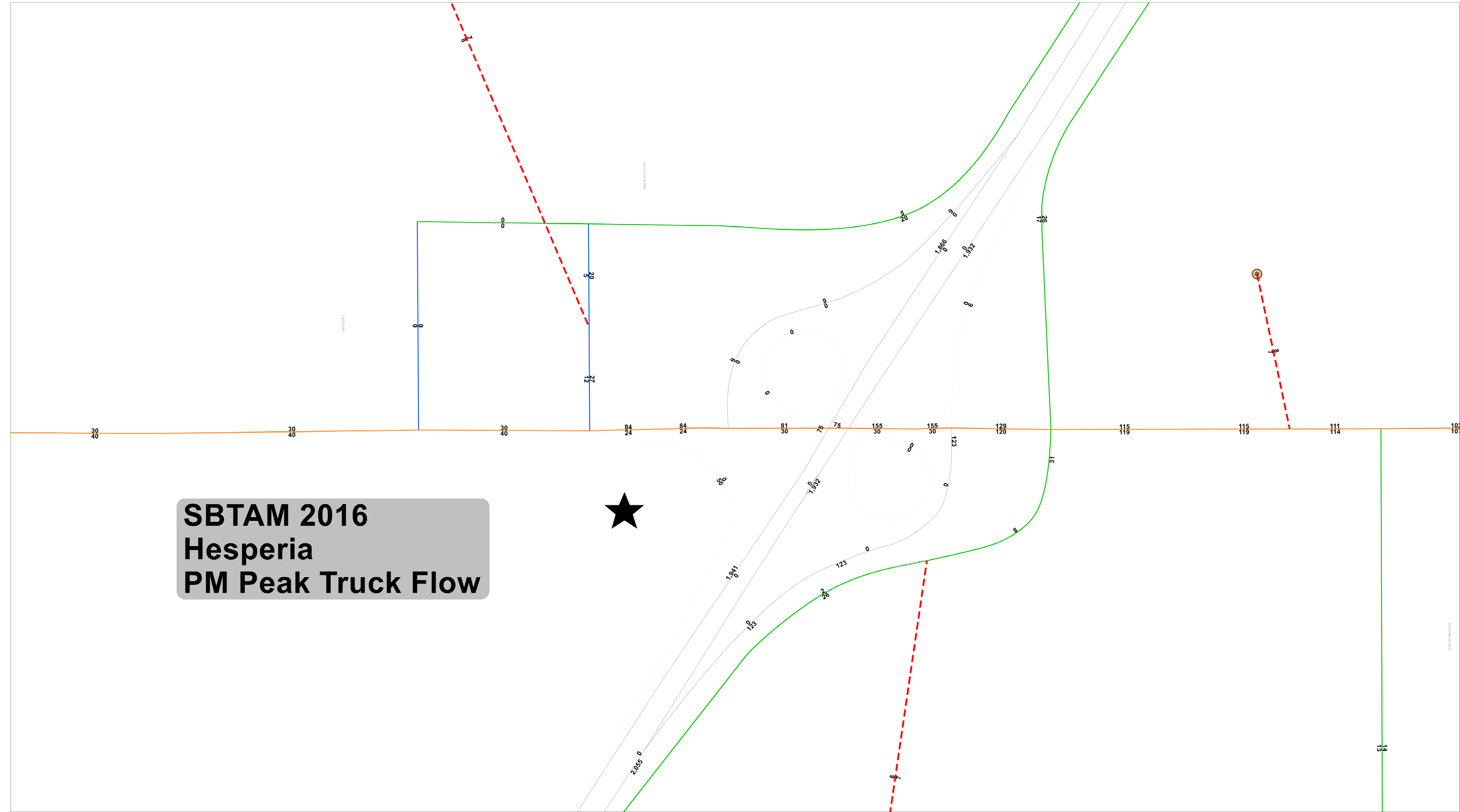
**SBTAM 2016
Hesperia
Average Daily Truck Flow**



**SBTAM 2016
Hesperia
AM Peak Truck Flow**



**SBTAM 2016
Hesperia
PM Peak Truck Flow**



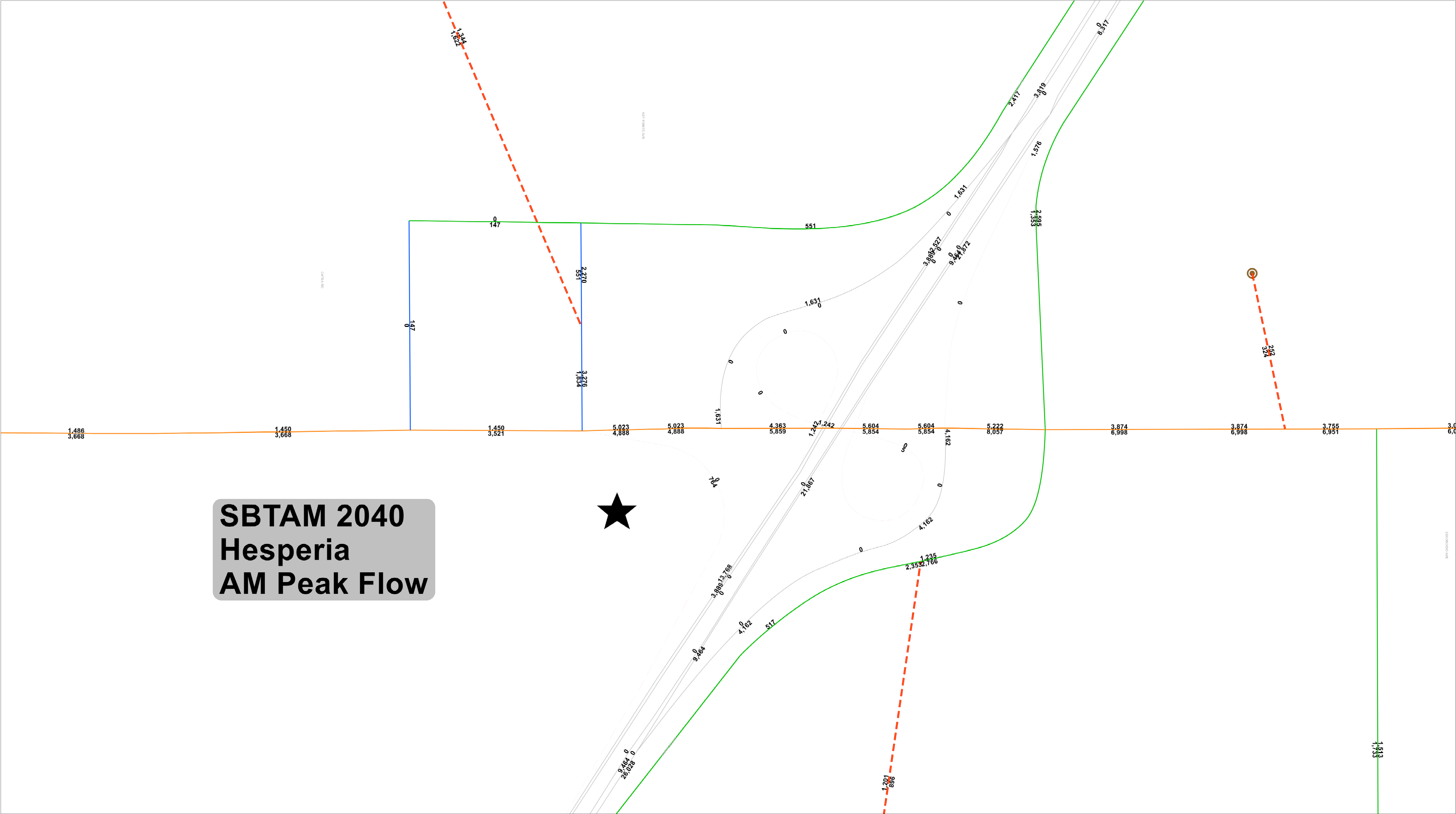
**SBTAM 2040
Hesperia
Average Daily Flow**



SBTAM 2040
Hesperia
AM Peak Flow



SBTAM 2040
Hesperia
AM Peak Flow



**SBTAM 2040
Hesperia
Average Daily Truck Flow**



**SBTAM 2040
Hesperia
AM Peak Truck Flow**



**SBTAM 2040
Hesperia
PM Peak Truck Flow**



APPENDIX G

POST-PROCESSING WORKSHEETS

INTERSECTION	LEG	CTP 2016 ADT	EXISTING 2022 ADT	CTP 2040 ADT	NEW 2040 ADT ¹	OPENING 2024 ADT
Amargosa Road at Palmetto Way	North	2,244	9,900	7,222	13,600	10,300
	South	2,244	9,900	7,222	13,600	10,300
	East	-	-	-	-	-
	West	-	-	-	-	-
Key Pointe Drive at Amargosa Road	North	-	-	-	-	-
	South	2,244	500	7,073	4,100	900
	East	2,244	7,500	7,222	11,200	7,900
	West	-	7,300	148	8,000	7,400
Key Pointe Drive at Main Street	North	3,774	7,300	15,374	16,000	8,300
	South	-	8,300	-	9,100	8,400
	East	24,616	35,000	38,630	45,500	36,200
	West	17,654	25,200	18,587	27,700	25,500
I-15 SB Ramps at Main Street	North	10,408	13,900	13,171	16,000	14,100
	South	-	-	-	-	-
	East	26,653	40,900	40,088	51,000	42,000
	West	20,058	35,100	33,647	45,300	36,200
I-15 NB Ramps at Main Street	North	3,744	4,700	6,177	6,500	4,900
	South	11,431	13,700	12,616	15,100	13,900
	East	33,711	47,800	48,912	59,200	49,100
	West	25,953	39,000	40,082	49,600	40,200

(1) Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2040.

Amargosa Road (NS) / Palmetto Way (EW) - #1											
MORNING PEAK HOUR						EVENING PEAK HOUR					
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022						EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022					
		0	188	0			0	409	0		
		<	v	>			<	v	>		
	0	^			^ 0		0	^			^ 0
	0	>			< 0		0	>			< 0
	0	v			v 0		0	v			v 0
		<	^	>			<	^	>		
		0	178	0			1	429	0		
EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022						EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022					
			188	178				409	429		
			v	^				v	^		
	0	<	IN =	366	< 0		1	<	IN =	839	< 0
	0	>	OUT =	366	> 0		0	>	OUT =	839	> 0
			v	^				v	^		
			188	178				409	430		
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):						EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):					
		0	20	0			0	8	0		
		<	v	>			<	v	>		
	0	^			^ 0		0	^			^ 0
	0	>			< 0		0	>			< 0
	0	v			v 0		0	v			v 0
PCE FACTORS BY AXLE: 2: 1.5 3: 2.0 4+: 3.0						PCE FACTORS BY AXLE: 2: 1.5 3: 2 4+: 3.0					
		<	^	>			<	^	>		
		0	18	0			0	14	0		
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES): 2022						TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES): 2022					
		0	208	0			0	417	0		
		<	v	>			<	v	>		
	0	^			^ 0		0	^			^ 0
	0	>			< 0		0	>			< 0
	0	v			v 0		0	v			v 0
		<	^	>			<	^	>		
		0	196	0			1	443	0		
EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016						EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016					
			114	188				162	704		
			v	^				v	^		
	0	<	IN =	302	< 0		0	<	IN =	866	< 0
	0	>	OUT =	302	> 0		0	>	OUT =	866	> 0
			v	^				v	^		
			114	188				162	704		
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2016						EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2016					
			13	12				5	20		
			v	^				v	^		
	0	<	IN =	25	< 0		0	<	IN =	25	< 0
	0	>	OUT =	25	> 0		0	>	OUT =	25	> 0
			v	^				v	^		
			13	12				5	20		
EXISTING PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333						EXISTING PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25					
			48	75				47	202		
			v	^				v	^		
	0	<	IN =	123	< 0		0	<	IN =	249	< 0
	0	>	OUT =	123	> 0		0	>	OUT =	249	> 0
			v	^				v	^		
			48	75				47	202		
FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040						FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040					
			1506	319				551	2417		
			v	^				v	^		
	0	<	IN =	1825	< 0		0	<	IN =	2968	< 0
	0	>	OUT =	1825	> 0		0	>	OUT =	2968	> 0
			v	^				v	^		
			1506	319				551	2417		
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2040						FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2040					
			38	10				12	48		
			v	^				v	^		
	0	<	IN =	48	< 0		0	<	IN =	60	< 0
	0	>	OUT =	48	> 0		0	>	OUT =	60	> 0
			v	^				v	^		
			38	10				12	48		
FUTURE PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333						FUTURE PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25					
			585	125				157	689		
			v	^				v	^		
	0	<	IN =	709	< 0		0	<	IN =	846	< 0
	0	>	OUT =	709	> 0		0	>	OUT =	846	> 0
			v	^				v	^		
			585	125				157	689		
RAW GROWTH (PCES): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00						RAW GROWTH (PCES): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00					
			537	49				111	487		
			v	^				v	^		
	0	<			< 0		0	<			< 0
	0	>			> 0		0	>			> 0
			v	^				v	^		
			537	49				111	487		

Amargosa Road (NS) / Palmetto Way (EW) - #1													
MORNING PEAK HOUR							EVENING PEAK HOUR						
ADJUSTED GROWTH (PCes): 10.00 MINIMUM GROWTH %							ADJUSTED GROWTH (PCes): 10 MINIMUM GROWTH %						
2016	TO	2040					2016	TO	2040				
			540	50						110	490		
			v	^						v	^		
			0	<	IN =	590				0	<	IN =	600
			0	>	OUT =	590				0	>	OUT =	600
			v							v			
			540			50				110			490
PRORATED GROWTH (PCes): 18 YEARS							PRORATED GROWTH (PCes): 18 YEARS						
2022	TO	2040					2022	TO	2040				
			410	40						80	370		
			v	^						v	^		
			0	<						0	<		
			0	>						0	>		
			v							v			
			410			40				80			370
NEW PROJECTED VOLUMES (PCes): 2040							NEW PROJECTED VOLUMES (PCes): 2040						
			620	240						500	810		
			v	^						v	^		
			0	<						0	<		
			0	>						0	>		
			v							v			
			620			240				500			810
YEAR 2024 GROWTH: 2 YEARS							YEAR 2024 GROWTH: 2 YEARS						
2022	TO	2024					2022	TO	2024				
			50	0						10	40		
			v	^						v	^		
			0	<						0	<		
			0	>						0	>		
			v							v			
			50			0				10			40
INITIAL YEAR 2024 VOLUMES: 2024							INITIAL YEAR 2024 VOLUMES: 2024						
			260	200						430	480		
			v	^						v	^		
			0	<	IN =	460				0	<	IN =	910
			0	>	OUT =	460				0	>	OUT =	910
			v							v			
			260			200				430			480
BALANCED YEAR 2024 VOLUMES: 2024							BALANCED YEAR 2024 VOLUMES: 2024						
			260	200						430	480		
			v	^						v	^		
			0	<	IN =	460				0	<	IN =	910
			0	>	OUT =	460				0	>	OUT =	910
			v							v			
			260			200				430			480
ADT BY LEG: 2040							ADT BY LEG: 2040						
			13,600							13,600			
			N							N			
		0	W	LEG	E	0			0	W	LEG	E	0
			S							S			
			13,600							13,600			
ADT BY LEG: 2024							ADT BY LEG: 2024						
			10,300							10,300			
			N							N			
		0	W	LEG	E	0			0	W	LEG	E	0
			S							S			
			10,300							10,300			

Amargosa Road (NS) / Palmetto Way (EW) - #1
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG		NORTH BOUND	LEFT	1	SOUTH LEG	
	THRU	196		240		THRU	443		810
	RIGHT	0		620		RIGHT	0		500
SOUTH BOUND	LEFT	0	NORTH LEG		SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	208		620		THRU	417		500
	RIGHT	0		240		RIGHT	0		810
EAST BOUND	LEFT	0	WEST LEG		EAST BOUND	LEFT	0	WEST LEG	
	THRU	0		0		THRU	0		0
	RIGHT	0		0		RIGHT	0		0
WEST BOUND	LEFT	0	EAST LEG		WEST BOUND	LEFT	0	EAST LEG	
	THRU	0		0		THRU	0		0
	RIGHT	0		0		RIGHT	0		0

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	0	0	NORTH LEG	NORTH BOUND	LEFT	1	1	NORTH LEG
	THRU	196	240	RATIO 6.3%		THRU	443	810	RATIO 9.6%
	RIGHT	0	0	ADT 13,600		RIGHT	0	0	ADT 13,600
SOUTH BOUND	LEFT	0	0	SOUTH LEG	SOUTH BOUND	LEFT	0	0	SOUTH LEG
	THRU	208	620	RATIO 6.3%		THRU	417	500	RATIO 9.6%
	RIGHT	0	0	ADT 13,600		RIGHT	0	0	ADT 13,600
EAST BOUND	LEFT	0	0	EAST LEG	EAST BOUND	LEFT	0	0	EAST LEG
	THRU	0	0	RATIO -		THRU	0	0	RATIO -
	RIGHT	0	0	ADT 0		RIGHT	0	0	ADT 0
WEST BOUND	LEFT	0	0	WEST LEG	WEST BOUND	LEFT	0	0	WEST LEG
	THRU	0	0	RATIO -		THRU	0	0	RATIO -
	RIGHT	0	0	ADT 0		RIGHT	0	0	ADT 0

Key Pointe Drive (NS) / Amargosa Road (EW) - #2													
MORNING PEAK HOUR							EVENING PEAK HOUR						
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022							EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022						
			0	0	0					0	0	0	
			<	v	>					<	v	>	
	0	^				^ 0		0	^				^ 0
	145	>				< 122		262	>				< 309
	1	v				v 7		9	v				v 9
			<	^	>					<	^	>	
			0	0	5					1	0	11	
EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022							EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022						
				0	0					0	0		
				v	^					v	^		
	122	<	IN =	280	<	129		310	<	IN =	601	<	318
	146	>	OUT =	280	>	150		271	>	OUT =	601	>	273
				v	^					v	^		
				8	5					18	12		
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):							EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):						
			0	0	0					0	0	0	
			<	v	>					<	v	>	
	0	^				^ 0		0	^				^ 0
	18	>				< 18		25	>				< 26
	0	v				v 0		0	v				v 3
PCE FACTORS BY AXLE: 2: 1.5 3: 2.0 4+: 3.0							PCE FACTORS BY AXLE: 2: 1.5 3: 2 4+: 3.0						
			<	^	>					<	^	>	
			0	0	0					2	0	8	
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs): 2022							TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs): 2022						
			0	0	0					0	0	0	
			<	v	>					<	v	>	
	0	^				^ 0		0	^				^ 0
	163	>				< 140		287	>				< 335
	1	v				v 7		9	v				v 12
			<	^	>					<	^	>	
			0	0	5					3	0	19	
EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016							EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016						
				0	0					0	0		
				v	^					v	^		
	0	<	IN =	302	<	114		0	<	IN =	866	<	162
	0	>	OUT =	302	>	188		0	>	OUT =	866	>	704
				v	^					v	^		
				114	188					162	704		
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs): 2016							EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs): 2016						
				0	0					0	0		
				v	^					v	^		
	0	<	IN =	25	<	13		0	<	IN =	25	<	5
	0	>	OUT =	25	>	12		0	>	OUT =	25	>	20
				v	^					v	^		
				13	12					5	20		
EXISTING PEAK HOUR MODEL YEAR (PCEs): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333							EXISTING PEAK HOUR MODEL YEAR (PCEs): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25						
				0	0					0	0		
				v	^					v	^		
	0	<	IN =	123	<	48		0	<	IN =	249	<	47
	0	>	OUT =	123	>	75		0	>	OUT =	249	>	202
				v	^					v	^		
				48	75					47	202		
FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040							FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040						
				0	0					0	0		
				v	^					v	^		
	0	<	IN =	1825	<	1506		0	<	IN =	2968	<	551
	0	>	OUT =	1824	>	319		147	>	OUT =	2968	>	2417
				v	^					v	^		
				1505	319					551	2270		
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs): 2040							FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs): 2040						
				0	0					0	0		
				v	^					v	^		
	0	<	IN =	48	<	38		0	<	IN =	59	<	12
	0	>	OUT =	48	>	10		1	>	OUT =	60	>	48
				v	^					v	^		
				38	10					12	46		
FUTURE PEAK HOUR MODEL YEAR (PCEs): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333							FUTURE PEAK HOUR MODEL YEAR (PCEs): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25						
				0	0					0	0		
				v	^					v	^		
	0	<	IN =	709	<	585		0	<	IN =	846	<	157
	0	>	OUT =	709	>	125		41	>	OUT =	846	>	689
				v	^					v	^		
				585	125					157	647		
RAW GROWTH (PCEs): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00							RAW GROWTH (PCEs): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00						
				0	0					0	0		
				v	^					v	^		
	0	<			<	537		0	<			<	111
	0	>			>	49		41	>			>	487
				v	^					v	^		
				537	49					111	445		

Key Pointe Drive (NS) / Amargosa Road (EW) - #2
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG		NORTH BOUND	LEFT	3	SOUTH LEG	
	THRU	0		50		THRU	0		350
	RIGHT	5		420		RIGHT	19		100
SOUTH BOUND	LEFT	0	NORTH LEG		SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0		0		THRU	0		0
	RIGHT	0		0		RIGHT	0		0
EAST BOUND	LEFT	0	WEST LEG		EAST BOUND	LEFT	0	WEST LEG	
	THRU	163		180		THRU	287		330
	RIGHT	1		150		RIGHT	9		360
WEST BOUND	LEFT	7	EAST LEG		WEST BOUND	LEFT	12	EAST LEG	
	THRU	140		560		THRU	335		430
	RIGHT	0		210		RIGHT	0		680

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	0	0	NORTH LEG	NORTH BOUND	LEFT	3	18	NORTH LEG
	THRU	0	0	RATIO -		THRU	0	0	RATIO -
	RIGHT	5	49	ADT 0		RIGHT	19	352	ADT 0
SOUTH BOUND	LEFT	0	0	SOUTH LEG	SOUTH BOUND	LEFT	0	0	SOUTH LEG
	THRU	0	0	RATIO 11.4%		THRU	0	0	RATIO 11.5%
	RIGHT	0	0	ADT 4,100		RIGHT	0	0	ADT 4,100
EAST BOUND	LEFT	0	0	EAST LEG	EAST BOUND	LEFT	0	0	EAST LEG
	THRU	163	179	RATIO 7.0%		THRU	287	328	RATIO 10.1%
	RIGHT	1	17	ADT 11,200		RIGHT	9	21	ADT 11,200
WEST BOUND	LEFT	7	403	WEST LEG	WEST BOUND	LEFT	12	79	WEST LEG
	THRU	140	154	RATIO 4.4%		THRU	335	369	RATIO 9.2%
	RIGHT	0	0	ADT 8,000		RIGHT	0	0	ADT 8,000

Key Pointe Drive (NS) / Main Street (EW) - #3													
MORNING PEAK HOUR							EVENING PEAK HOUR						
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022							EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022						
			8	26	114				15	84	213		
			<	v	>				<	v	>		
	19	^				^ 115		44	^			^ 182	
	752	>				< 477		855	>			< 1015	
	8	v				v 184		18	v			v 287	
			<	^	>				<	^	>		
			4	12	91				31	55	232		
EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022							EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022						
				148	146					312	281		
				v	^					v	^		
	489	<	IN =	1810	<	776		1061	<	IN =	3031	<	1484
	779	>	OUT =	1810	>	957		917	>	OUT =	3031	>	1300
				v	^					v	^		
				218	107					389	318		
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):							EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):						
			3	0	23				0	0	23		
			<	v	>				<	v	>		
	11	^				^ 17		2	^			^ 12	
	174	>				< 130		115	>			< 96	
	0	v				v 9		0	v			v 8	
PCE FACTORS BY AXLE: 2: 1.5 3: 2.0 4+: 3.0 0 0 6							PCE FACTORS BY AXLE: 2: 1.5 3: 2 4+: 3.0 0 2 9						
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES): 2022							TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES): 2022						
			11	26	137				15	84	236		
			<	v	>				<	v	>		
	30	^				^ 132		46	^			^ 194	
	926	>				< 607		970	>			< 1111	
	8	v				v 193		18	v			v 295	
			<	^	>				<	^	>		
			4	12	97				31	57	241		
EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016							EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016						
				240	282					374	932		
				v	^					v	^		
	1314	<	IN =	4812	<	2520		2884	<	IN =	6728	<	4134
	2052	>	OUT =	4812	>	3216		2220	>	OUT =	6729	>	2913
				v	^					v	^		
				0	0					0	0		
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2016							EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2016						
				18	17					12	27		
				v	^					v	^		
	22	<	IN =	121	<	66		30	<	IN =	136	<	84
	37	>	OUT =	121	>	82		40	>	OUT =	137	>	80
				v	^					v	^		
				0	0					0	0		
EXISTING PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333							EXISTING PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25						
				97	113					108	268		
				v	^					v	^		
	507	<	IN =	1869	<	980		815	<	IN =	1918	<	1179
	792	>	OUT =	1869	>	1249		632	>	OUT =	1918	>	836
				v	^					v	^		
				0	0					0	0		
FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040							FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040						
				1881	1138					1834	3276		
				v	^					v	^		
	2523	<	IN =	7424	<	4642		1450	<	IN =	10378	<	5023
	901	>	OUT =	7424	>	3763		3521	>	OUT =	10378	>	5652
				v	^					v	^		
				0	0					0	0		
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2040							FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2040						
				67	36					42	79		
				v	^					v	^		
	72	<	IN =	226	<	135		20	<	IN =	223	<	138
	24	>	OUT =	226	>	118		43	>	OUT =	222	>	123
				v	^					v	^		
				0	0					0	0		
FUTURE PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333							FUTURE PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25						
				737	444					524	937		
				v	^					v	^		
	983	<	IN =	2896	<	1809		411	<	IN =	2962	<	1441
	350	>	OUT =	2896	>	1469		997	>	OUT =	2961	>	1613
				v	^					v	^		
				0	0					0	0		
RAW GROWTH (PCES): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00							RAW GROWTH (PCES): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00						
				640	332					416	669		
				v	^					v	^		
	476	<				< 829		-404	<			< 262	
	-442	>				> 220		365	>			> 778	
				v	^					v	^		
				0	0					0	0		

Key Pointe Drive (NS) / Main Street (EW) - #3															
MORNING PEAK HOUR						EVENING PEAK HOUR									
ADJUSTED GROWTH (PCes):		2016	TO	2040		ADJUSTED GROWTH (PCes):		2016	TO	2040					
10.00 MINIMUM GROWTH %					640	330	10 MINIMUM GROWTH %				420	670			
					v	^					v	^			
				480	<	IN = 1570	<	830			120	<	IN = 1050	<	260
				100	>	OUT = 1030	>	220			370	>	OUT = 1570	>	780
					v	^					v	^			
					0	0					0	0			
PRORATED GROWTH (PCes):		2022	TO	2040		PRORATED GROWTH (PCes):		2022	TO	2040					
18 YEARS					480	250	18 YEARS				320	500			
					v	^					v	^			
				360	<		<	620			90	<		<	200
				80	>		>	170			280	>		>	590
					v	^					v	^			
					0	0					0	0			
NEW PROJECTED VOLUMES (PCes):		2040			650	420	NEW PROJECTED VOLUMES (PCes):		2040		660	800			
					v	^					v	^			
				980	<		<	1550			1250	<		<	1800
				1040	>		>	1330			1310	>		>	2040
					v	^					v	^			
					230	110					400	330			
YEAR 2024 GROWTH:		2022	TO	2024		YEAR 2024 GROWTH:		2022	TO	2024					
2 YEARS					50	30	2 YEARS				40	60			
					v	^					v	^			
				40	<		<	70			10	<		<	20
				10	>		>	20			30	>		>	70
					v	^					v	^			
					0	0					0	0			
INITIAL YEAR 2024 VOLUMES:					220	200	INITIAL YEAR 2024 VOLUMES:				380	360			
2024					v	^	2024				v	^			
				660	<	IN = 2300	<	1000			1170	<	IN = 3390	<	1620
				970	>	OUT = 2270	>	1180			1060	>	OUT = 3450	>	1520
					v	^					v	^			
					230	110					400	330			
BALANCED YEAR 2024 VOLUMES:					220	200	BALANCED YEAR 2024 VOLUMES:				390	360			
2024					v	^	2024				v	^			
				670	<	IN = 2300	<	1000			1170	<	IN = 3460	<	1650
				970	>	OUT = 2300	>	1200			1080	>	OUT = 3450	>	1520
					v	^					v	^			
					230	110					400	340			
ADT BY LEG:					16,000		ADT BY LEG:				16,000				
2040					N		2040				N				
			27,700	W	LEG	E	45,500			27,700	W	LEG	E	45,500	
					S						S				
					9,100						9,100				
ADT BY LEG:					8,300		ADT BY LEG:				8,300				
2024					N		2024				N				
			25,500	W	LEG	E	36,200			25,500	W	LEG	E	36,200	
					S						S				
					8,400						8,400				

Key Pointe Drive (NS) / Main Street (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	4	SOUTH LEG		NORTH BOUND	LEFT	31	SOUTH LEG	
	THRU	12		110		THRU	57		330
	RIGHT	97		230		RIGHT	241		400
SOUTH BOUND	LEFT	137	NORTH LEG		SOUTH BOUND	LEFT	236	NORTH LEG	
	THRU	26		650		THRU	84		660
	RIGHT	11		420		RIGHT	15		800
EAST BOUND	LEFT	30	WEST LEG		EAST BOUND	LEFT	46	WEST LEG	
	THRU	926		1,040		THRU	970		1,310
	RIGHT	8		980		RIGHT	18		1,250
WEST BOUND	LEFT	193	EAST LEG		WEST BOUND	LEFT	295	EAST LEG	
	THRU	607		1,550		THRU	1,111		1,800
	RIGHT	132		1,330		RIGHT	194		2,040

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	4	5	NORTH LEG	NORTH BOUND	LEFT	31	34	NORTH LEG
	THRU	12	23	RATIO 6.2%		THRU	57	121	RATIO 9.5%
	RIGHT	97	107	ADT 16,000		RIGHT	241	265	ADT 16,000
SOUTH BOUND	LEFT	137	436	SOUTH LEG	SOUTH BOUND	LEFT	236	551	SOUTH LEG
	THRU	26	73	RATIO 4.7%		THRU	84	139	RATIO 9.9%
	RIGHT	11	60	ADT 9,100		RIGHT	15	32	ADT 9,100
EAST BOUND	LEFT	30	74	EAST LEG	EAST BOUND	LEFT	46	143	EAST LEG
	THRU	926	1,019	RATIO 6.6%		THRU	970	1,274	RATIO 9.2%
	RIGHT	8	9	ADT 45,500		RIGHT	18	20	ADT 45,500
WEST BOUND	LEFT	193	212	WEST LEG	WEST BOUND	LEFT	295	325	WEST LEG
	THRU	607	916	RATIO 7.5%		THRU	1,111	1,222	RATIO 9.8%
	RIGHT	132	323	ADT 27,700		RIGHT	194	536	ADT 27,700

I-15 SB Ramps (NS) / Main Street (EW) - #4											
MORNING PEAK HOUR						EVENING PEAK HOUR					
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):						EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):					
2022						2022					
		145	0	252			313	0	418		
		<	v	>			<	v	>		
	0	^			^ 363		0	^			^ 337
	848	>			< 632		1161	>			< 1172
	111	v			v 0		142	v			v 0
		<	^	>				<	^	>	
		0	0	0				0	0	0	
EXISTING PEAK HOUR COUNT YEAR (AUTOS):						EXISTING PEAK HOUR COUNT YEAR (AUTOS):					
2022						2022					
			397	363				731	337		
			v	^				v	^		
	777	<	IN =	2351	< 995		1485	<	IN =	3543	< 1509
	959	>	OUT =	2351	> 1100		1303	>	OUT =	3543	> 1579
			v	^				v	^		
			111	0				142	0		
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):						EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):					
		32	0	56				38	0	25	
		<	v	>				<	v	>	
	0	^			^ 148		0	^			^ 81
	161	>			< 124		111	>			< 81
	42	v			v 0		36	v			v 0
PCE FACTORS BY AXLE:						PCE FACTORS BY AXLE:					
2:	1.5	3:	2.0	4+:	3.0	2:	1.5	3:	2	4+:	3.0
			0	0	0				0	0	0
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES):						TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES):					
2022						2022					
		177	0	308				351	0	443	
		<	v	>				<	v	>	
	0	^			^ 511		0	^			^ 418
	1009	>			< 756		1272	>			< 1253
	153	v			v 0		178	v			v 0
		<	^	>				<	^	>	
		0	0	0				0	0	0	
EXISTING PEAK PERIOD MODEL YEAR (AUTO):						EXISTING PEAK PERIOD MODEL YEAR (AUTO):					
2016						2016					
			774	1475				1065	1281		
			v	^				v	^		
	2520	<	IN =	5645	< 3607		4134	<	IN =	8254	< 5050
	1264	>	OUT =	5645	> 1650		2139	>	OUT =	8253	> 2838
			v	^				v	^		
			0	0				0	0		
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES):						EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES):					
2016						2016					
			9	44				9	75		
			v	^				v	^		
	66	<	IN =	132	< 107		84	<	IN =	189	< 156
	16	>	OUT =	132	> 22		24	>	OUT =	189	> 30
			v	^				v	^		
			0	0				0	0		
EXISTING PEAK HOUR MODEL YEAR (PCES):						EXISTING PEAK HOUR MODEL YEAR (PCES):					
PHF FOR CARS: 0.38						PHF FOR CARS: 0.28					
PHF FOR TRUCKS: 0.333						PHF FOR TRUCKS: 0.25					
			297	575				300	377		
			v	^				v	^		
	980	<	IN =	2189	< 1406		1179	<	IN =	2358	< 1453
	486	>	OUT =	2189	> 634		605	>	OUT =	2358	> 802
			v	^				v	^		
			0	0				0	0		
FUTURE PEAK PERIOD MODEL YEAR (AUTO):						FUTURE PEAK PERIOD MODEL YEAR (AUTO):					
2040						2040					
			1076	1473				1631	1242		
			v	^				v	^		
	4642	<	IN =	8248	< 5408		5023	<	IN =	12124	< 5605
	1764	>	OUT =	8247	> 2132		4888	>	OUT =	12124	> 5859
			v	^				v	^		
			0	0				0	0		
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES):						FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES):					
2040						2040					
			47	43				26	106		
			v	^				v	^		
	135	<	IN =	238	< 142		138	<	IN =	314	< 230
	49	>	OUT =	238	> 60		58	>	OUT =	315	> 71
			v	^				v	^		
			0	0				0	0		
FUTURE PEAK HOUR MODEL YEAR (PCES):						FUTURE PEAK HOUR MODEL YEAR (PCES):					
PHF FOR CARS: 0.38						PHF FOR CARS: 0.28					
PHF FOR TRUCKS: 0.333						PHF FOR TRUCKS: 0.25					
			425	574				463	374		
			v	^				v	^		
	1809	<	IN =	3213	< 2102		1441	<	IN =	3473	< 1627
	687	>	OUT =	3213	> 830		1383	>	OUT =	3473	> 1658
			v	^				v	^		
			0	0				0	0		
RAW GROWTH (PCES): 2016 TO 2040						RAW GROWTH (PCES): 2016 TO 2040					
CONVERSION OF TRUCKS TO: 2040						CONVERSION OF TRUCKS TO: 2040					
FACTOR = 1.00						FACTOR = 1.00					
			127	-1				163	-3		
			v	^				v	^		
	829	<			< 696		262	<			< 174
	201	>			> 196		778	>			> 856
			v	^				v	^		
			0	0				0	0		

I-15 SB Ramps (NS) / Main Street (EW) - #4													
MORNING PEAK HOUR							EVENING PEAK HOUR						
ADJUSTED GROWTH (PCes): 10.00 MINIMUM GROWTH %							ADJUSTED GROWTH (PCes): 10 MINIMUM GROWTH %						
2016	TO	2040					2016	TO	2040				
				130	50						160	40	
				v	^						v	^	
			830	<	IN =	1030				260	<	IN =	1110
			200	>	OUT =	1080				780	>	OUT =	1160
				v	^						v	^	
				0	0						0	0	
PRORATED GROWTH (PCes): 18 YEARS							PRORATED GROWTH (PCes): 18 YEARS						
2022	TO	2040					2022	TO	2040				
				100	40						120	30	
				v	^						v	^	
			620	<						200	<		
			150	>						590	>		
				v	^						v	^	
				0	0						0	0	
NEW PROJECTED VOLUMES (PCes): 2040							NEW PROJECTED VOLUMES (PCes): 2040						
				590	550						910	450	
				v	^						v	^	
			1550	<						1800	<		
			1310	>						2040	>		
				v	^						v	^	
				150	0						180	0	
YEAR 2024 GROWTH: 2 YEARS							YEAR 2024 GROWTH: 2 YEARS						
2022	TO	2024					2022	TO	2024				
				10	0						10	0	
				v	^						v	^	
			70	<						20	<		
			20	>						70	>		
				v	^						v	^	
				0	0						0	0	
INITIAL YEAR 2024 VOLUMES: 2024							INITIAL YEAR 2024 VOLUMES: 2024						
				500	510						800	420	
				v	^						v	^	
			1000	<	IN =	3010				1620	<	IN =	4000
			1180	>	OUT =	3000				1520	>	OUT =	4010
				v	^						v	^	
				150	0						180	0	
BALANCED YEAR 2024 VOLUMES: 2024							BALANCED YEAR 2024 VOLUMES: 2024						
				500	510						800	420	
				v	^						v	^	
			1000	<	IN =	3010				1620	<	IN =	4000
			1180	>	OUT =	3000				1520	>	OUT =	4010
				v	^						v	^	
				150	0						180	0	
ADT BY LEG: 2040							ADT BY LEG: 2040						
				16,000							16,000		
				N							N		
		45,300	W	LEG	E	51,000			45,300	W	LEG	E	51,000
				S							S		
				0							0		
ADT BY LEG: 2024							ADT BY LEG: 2024						
				14,100							14,100		
				N							N		
		36,200	W	LEG	E	42,000			36,200	W	LEG	E	42,000
				S							S		
				0							0		

I-15 SB Ramps (NS) / Main Street (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG		NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0		0		THRU	0		0
	RIGHT	0		150		RIGHT	0		180
SOUTH BOUND	LEFT	308	NORTH LEG		SOUTH BOUND	LEFT	443	NORTH LEG	
	THRU	0		590		THRU	0		910
	RIGHT	177		550		RIGHT	351		450
EAST BOUND	LEFT	0	WEST LEG		EAST BOUND	LEFT	0	WEST LEG	
	THRU	1,009		1,310		THRU	1,272		2,040
	RIGHT	153		1,550		RIGHT	178		1,800
WEST BOUND	LEFT	0	EAST LEG		WEST BOUND	LEFT	0	EAST LEG	
	THRU	756		1,800		THRU	1,253		1,800
	RIGHT	511		1,470		RIGHT	418		2,370

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	0	0	NORTH LEG RATIO 7.3% ADT 16,000	NORTH BOUND	LEFT	0	0	NORTH LEG RATIO 8.6% ADT 16,000
	THRU	0	0			THRU	0	0	
	RIGHT	0	0			RIGHT	0	0	
SOUTH BOUND	LEFT	308	339	SOUTH LEG RATIO - ADT 0	SOUTH BOUND	LEFT	443	496	SOUTH LEG RATIO - ADT 0
	THRU	0	0			THRU	0	0	
	RIGHT	177	274			RIGHT	351	423	
EAST BOUND	LEFT	0	0	EAST LEG RATIO 6.5% ADT 51,000	EAST BOUND	LEFT	0	0	EAST LEG RATIO 8.3% ADT 51,000
	THRU	1,009	1,152			THRU	1,272	1,874	
	RIGHT	153	168			RIGHT	178	196	
WEST BOUND	LEFT	0	0	WEST LEG RATIO 6.3% ADT 45,300	WEST BOUND	LEFT	0	0	WEST LEG RATIO 8.5% ADT 45,300
	THRU	756	1,276			THRU	1,253	1,378	
	RIGHT	511	562			RIGHT	418	460	

I-15 NB Ramps (NS) / Main Street (EW) - #5											
MORNING PEAK HOUR						EVENING PEAK HOUR					
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022						EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS): 2022					
		0	0	0			0	0	0		
		<	v	>			<	v	>		
	0	^			^	394	0	^			^
	886	>			<	894	1332	>			<
	251	v			v	0	198	v			v
		<	^	>				<	^	>	
		54	1	293				176	4	641	
EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022						EXISTING PEAK HOUR COUNT YEAR (AUTOS): 2022					
			0	395				0	369		
			v	^				v	^		
	948	<	IN =	2773	<	1288	1542	<	IN =	4082	<
	1137	>	OUT =	2773	>	1179	1530	>	OUT =	4082	>
			v	^				v	^		
			251	348				198	821		
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):						EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCES):					
		0	0	0				0	0	0	
		<	v	>				<	v	>	
	0	^			^	67	0	^			^
	130	>			<	209	116	>			<
	52	v			v	0	27	v			v
PCE FACTORS BY AXLE: 2: 1.5 3: 2.0 4+: 3.0 28 2 118						PCE FACTORS BY AXLE: 2: 1.5 3: 2 4+: 3.0 14 0 131					
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES): 2022						TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCES): 2022					
		0	0	0				0	0	0	
		<	v	>				<	v	>	
	0	^			^	461	0	^			^
	1016	>			<	1103	1448	>			<
	303	v			v	0	225	v			v
		<	^	>				<	^	>	
		82	3	411				190	4	772	
EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016						EXISTING PEAK PERIOD MODEL YEAR (AUTO): 2016					
			0	721				0	816		
			v	^				v	^		
	3607	<	IN =	6597	<	4102	5050	<	IN =	11535	<
	1401	>	OUT =	6597	>	2269	2765	>	OUT =	11535	>
			v	^				v	^		
			0	1094				0	4550		
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2016						EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2016					
			0	11				0	6		
			v	^				v	^		
	107	<	IN =	212	<	104	155	<	IN =	282	<
	19	>	OUT =	212	>	94	30	>	OUT =	281	>
			v	^				v	^		
			0	89				0	123		
EXISTING PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333						EXISTING PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25					
			0	278				0	230		
			v	^				v	^		
	1406	<	IN =	2577	<	1593	1453	<	IN =	3300	<
	539	>	OUT =	2577	>	894	782	>	OUT =	3300	>
			v	^				v	^		
			0	445				0	1305		
FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040						FUTURE PEAK PERIOD MODEL YEAR (AUTO): 2040					
			0	1086				0	1576		
			v	^				v	^		
	5408	<	IN =	9242	<	5912	5604	<	IN =	15238	<
	2132	>	OUT =	9243	>	2749	5854	>	OUT =	15237	>
			v	^				v	^		
			0	1198				0	4162		
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2040						FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCES): 2040					
			0	30				0	18		
			v	^				v	^		
	142	<	IN =	342	<	139	230	<	IN =	408	<
	60	>	OUT =	342	>	170	71	>	OUT =	409	>
			v	^				v	^		
			0	143				0	133		
FUTURE PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.38 PHF FOR TRUCKS: 0.333						FUTURE PEAK HOUR MODEL YEAR (PCES): PHF FOR CARS: 0.28 PHF FOR TRUCKS: 0.25					
			0	423				0	446		
			v	^				v	^		
	2102	<	IN =	3626	<	2293	1627	<	IN =	4369	<
	830	>	OUT =	3626	>	1101	1657	>	OUT =	4369	>
			v	^				v	^		
			0	503				0	1199		
RAW GROWTH (PCES): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00						RAW GROWTH (PCES): 2016 TO 2040 CONVERSION OF TRUCKS TO: FACTOR = 1.00					
			0	145				0	216		
			v	^				v	^		
	696	<			<	699	174	<			<
	291	>			>	208	875	>			>
			v	^				v	^		
			0	58				0	-106		

I-15 NB Ramps (NS) / Main Street (EW) - #5																	
MORNING PEAK HOUR							EVENING PEAK HOUR										
ADJUSTED GROWTH (PCes):		2016	TO	2040			ADJUSTED GROWTH (PCes):		2016	TO	2040						
10.00 MINIMUM GROWTH %					0	150	10 MINIMUM GROWTH %					0	220				
					v	^						v	^				
				700	<	IN =	1050	<	700			170	<	IN =	1190	<	300
				290	>	OUT =	1070	>	210			880	>	OUT =	1070	>	680
					v	^						v	^				
					10	60						0	10				
PRORATED GROWTH (PCes):		2022	TO	2040			PRORATED GROWTH (PCes):		2022	TO	2040						
18 YEARS					0	110	18 YEARS					0	170				
					v	^						v	^				
				530	<		<	530			130	<		<	230		
				220	>		>	160			660	>		>	510		
					v	^						v	^				
					10	50						0	10				
NEW PROJECTED VOLUMES (PCes):		2040			0	570	NEW PROJECTED VOLUMES (PCes):		2040			0	580				
					v	^						v	^				
				1720	<		<	2090			1850	<		<	2160		
				1540	>		>	1590			2330	>		>	2730		
					v	^						v	^				
					310	550						230	980				
YEAR 2024 GROWTH:		2022	TO	2024			YEAR 2024 GROWTH:		2022	TO	2024						
2 YEARS					0	10	2 YEARS					0	20				
					v	^						v	^				
				60	<		<	60			10	<		<	30		
				20	>		>	20			70	>		>	60		
					v	^						v	^				
					0	10						0	0				
INITIAL YEAR 2024 VOLUMES:		2024			0	470	INITIAL YEAR 2024 VOLUMES:		2024			0	430				
					v	^						v	^				
				1250	<	IN =	3470	<	1620			1730	<	IN =	4670	<	1960
				1340	>	OUT =	3470	>	1450			1740	>	OUT =	4670	>	2280
					v	^						v	^				
					300	510						230	970				
BALANCED YEAR 2024 VOLUMES:		2024			0	470	BALANCED YEAR 2024 VOLUMES:		2024			0	430				
					v	^						v	^				
				1250	<	IN =	3470	<	1620			1730	<	IN =	4670	<	1960
				1340	>	OUT =	3470	>	1450			1740	>	OUT =	4670	>	2280
					v	^						v	^				
					300	510						230	970				
ADT BY LEG:				6,500		ADT BY LEG:				6,500							
2040				N		2040				N							
		49,600	W	LEG	E	59,200			49,600	W	LEG	E	59,200				
				S						S							
				15,100						15,100							
ADT BY LEG:				4,900		ADT BY LEG:				4,900							
2024				N		2024				N							
		40,200	W	LEG	E	49,100			40,200	W	LEG	E	49,100				
				S						S							
				13,900						13,900							

I-15 NB Ramps (NS) / Main Street (EW) - #5
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	82	SOUTH LEG		NORTH BOUND	LEFT	190	SOUTH LEG	
	THRU	3		550		THRU	4		980
	RIGHT	411		310		RIGHT	772		230
SOUTH BOUND	LEFT	0	NORTH LEG		SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0		0		THRU	0		0
	RIGHT	0		570		RIGHT	0		580
EAST BOUND	LEFT	0	WEST LEG		EAST BOUND	LEFT	0	WEST LEG	
	THRU	1,016		1,540		THRU	1,448		2,330
	RIGHT	303		1,720		RIGHT	225		1,850
WEST BOUND	LEFT	0	EAST LEG		WEST BOUND	LEFT	0	EAST LEG	
	THRU	1,103		2,090		THRU	1,529		2,160
	RIGHT	461		1,590		RIGHT	404		2,730

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	82	137	NORTH LEG	NORTH BOUND	LEFT	190	245	NORTH LEG
	THRU	3	4	RATIO 8.8%		THRU	4	7	RATIO 8.9%
	RIGHT	411	452	ADT 6,500		RIGHT	772	849	ADT 6,500
SOUTH BOUND	LEFT	0	0	SOUTH LEG	SOUTH BOUND	LEFT	0	0	SOUTH LEG
	THRU	0	0	RATIO 6.1%		THRU	0	0	RATIO 8.9%
	RIGHT	0	0	ADT 15,100		RIGHT	0	0	ADT 15,100
EAST BOUND	LEFT	0	0	EAST LEG	EAST BOUND	LEFT	0	0	EAST LEG
	THRU	1,016	1,189	RATIO 6.4%		THRU	1,448	2,024	RATIO 8.7%
	RIGHT	303	333	ADT 59,200		RIGHT	225	248	ADT 59,200
WEST BOUND	LEFT	0	0	WEST LEG	WEST BOUND	LEFT	0	0	WEST LEG
	THRU	1,103	1,583	RATIO 6.5%		THRU	1,529	1,682	RATIO 8.5%
	RIGHT	461	566	ADT 49,600		RIGHT	404	573	ADT 49,600



GANDDINI GROUP INC.

714.795.3100 | ganddini.com