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NISQUALLI ROAD TRAILER LOT EXPANSION (PLN23-00011)

TRAFFIC ANALYSIS

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Reference Number	Agency	Date
15241-05 TA Report	City of Victorville	November 22, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CMP	Congestion Management Program
DIF	Development Impact Fee
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
PCE	Passenger Car Equivalent
PHF	Peak Hour Factor
Project	Nisqualli Road Trailer Lot Expansion
SBCTA	San Bernardino County Transportation Authority
TA	Traffic Analysis
v/c	Volume to Capacity
vphgpl	Vehicles per Hour Green per Lane
VVTA	Victor Valley Transit Authority

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1 INTRODUCTION

This report presents the results of the traffic analysis (TA) for the proposed Nisqualli Road Trailer Lot Expansion ("Project"), which is located northeast of the intersection of Enterprise Way and Nisqualli Road in the City of Victorville. The Project's location in relation to the surrounding area is shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and where necessary recommend improvements to achieve acceptable operations consistent with General Plan level of service goals and policies. This TA has been prepared in accordance with the City of Victorville's General Guidelines for Conducting Traffic Studies and Determination of Intersection Level of Service and Improvement Needs (January 20, 2005) and the County of San Bernardino's Transportation Impact Study (July 9, 2019). (1) (2) The City approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

1.1 SUMMARY OF FINDINGS

The Project is to install a stop control for egress traffic at Driveway 1 on Enterprise Way in conjunction with development of the site in order to facilitate site access. No site adjacent roadways are proposed other than the driveway improvements needed at Driveway 1. Access to the site will be accommodated via a new 40-foot-wide driveway located between two existing industrial buildings.

1.2 PROJECT OVERVIEW

Exhibit 1-2 illustrates the preliminary Project site plan. ~~The Project is proposing to develop a truck and trailer parking/drop lot on 10.04 gross acres. The site currently accommodates 112 truck and trailer parking stalls and proposes a total of 198 13.5-foot by 60-foot truck and trailer parking stalls (resulting in a net increase of 86 trailer parking stalls). The portion of the site that will be developed with the new trailer stalls is currently vacant and will be developed as an expansion to an existing industrial building located on the northeast corner of Enterprise Way and Nisqualli Road.~~ The proposed Project has an anticipated Opening Year of 2024.

As indicated on Exhibit 1-2, access to the Project site will be provided via a new driveway on Enterprise Way located between two existing industrial buildings. Access will also be accommodated through the existing industrial building on the northeast corner of Enterprise Way and Nisqualli Road.

EXHIBIT 1-1: LOCATION MAP

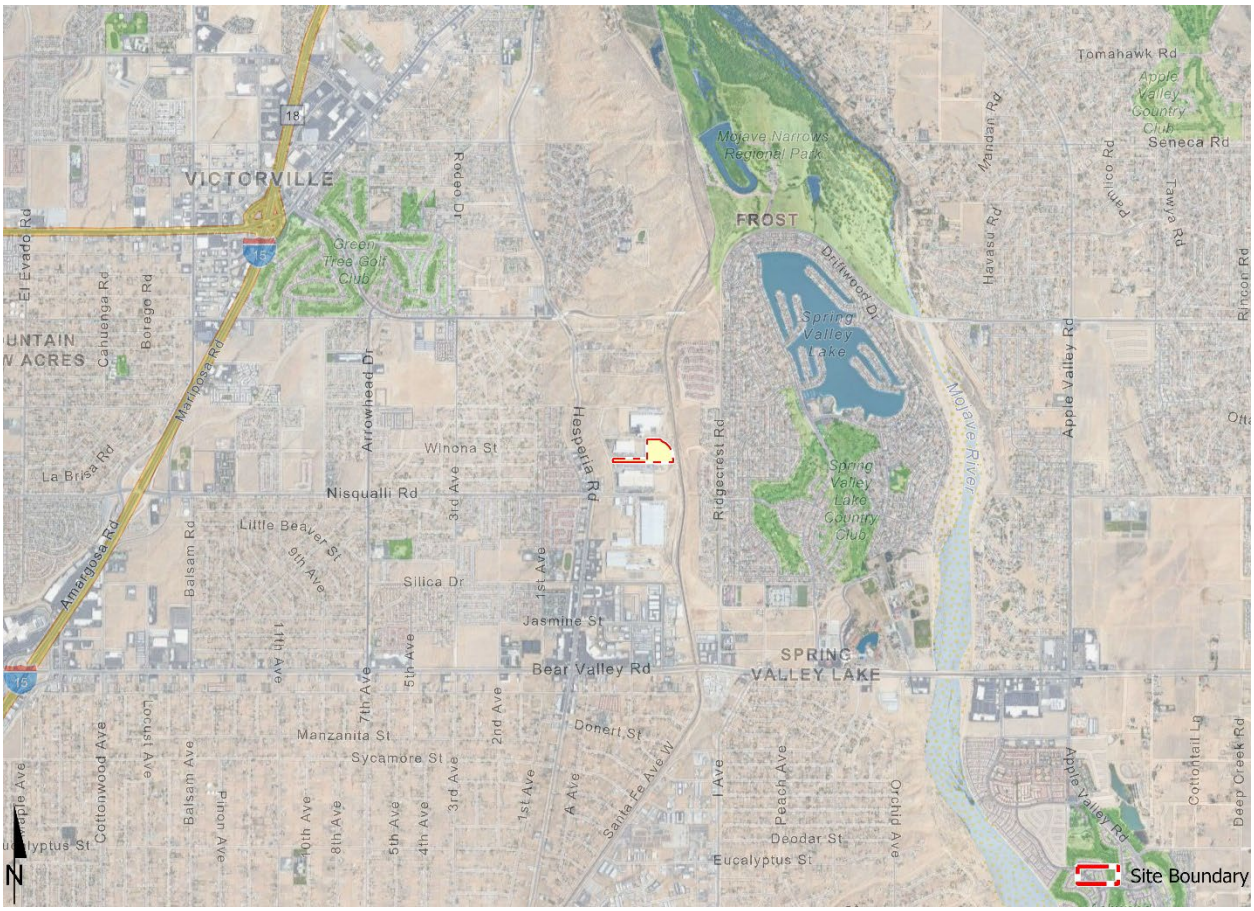
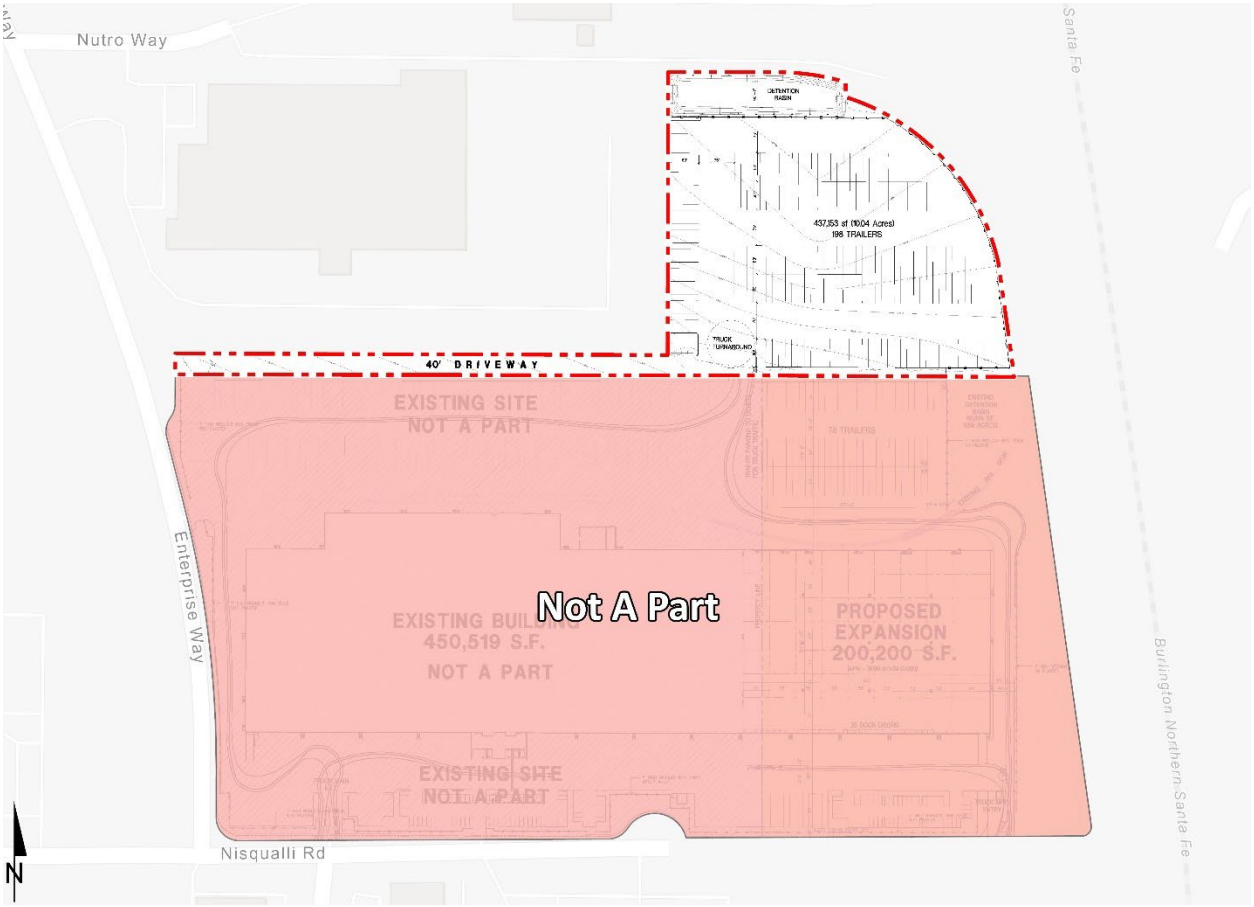


EXHIBIT 1-2: PRELIMINARY SITE PLAN



The latest Institute of Transportation Engineers (**ITE**) Trip Generation Manual (11th Edition, 2021) does not currently have any trip generation rates for a truck and trailer parking/drop lot, as such, trip generation rates for the proposed Project have been developed based on the average of data collected at three other facilities with operations similar to those proposed. (3) The proposed Project is anticipated to generate 184 two-way trips per day with 11 AM peak hour trips and 14 PM peak hour trips (in actual vehicles) with a net increase of 86 trailer parking stalls.

Passenger car equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the City's recommended PCE factors. Consistent with the City's requirements, the peak hour intersection operations analysis has been conducted using the PCE trip generation. The Project is anticipated to generate 348 two-way PCE trips per day with 23 PCE AM peak hour trips and 23 PCE PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.3 ANALYSIS SCENARIOS

For the purposes of this TA, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2023) Conditions
- Opening Year Cumulative (2024) Without Project Conditions
- Opening Year Cumulative (2024) With Project Conditions
- Horizon Year (2033) Without Project Conditions
- Horizon Year (2033) With Project Conditions

1.3.1 EXISTING (2023) CONDITIONS

Information for Existing (2023) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.3.2 OPENING YEAR CUMULATIVE (2024) CONDITIONS

The Opening Year Cumulative conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2023) conditions of 2.0% is included for Opening Year Cumulative (2024) traffic. This list of cumulative development projects was compiled from information provided by the City of Victorville and is consistent with other recent studies in the study area.

1.3.3 HORIZON YEAR (2033) CONDITIONS

The Horizon Year (2033) conditions analysis determines the potential longer-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2023) conditions of 21.90% is included for Horizon Year (2033) traffic. This list of cumulative development projects was compiled from information provided by the City of Victorville and is consistent with other recent studies in the study area.

1.4 STUDY AREA

To ensure that this TA satisfies the City of Victorville's requirements, Urban Crossroads, Inc. prepared a TA scoping package for review by City staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology (see Appendix 1.1).

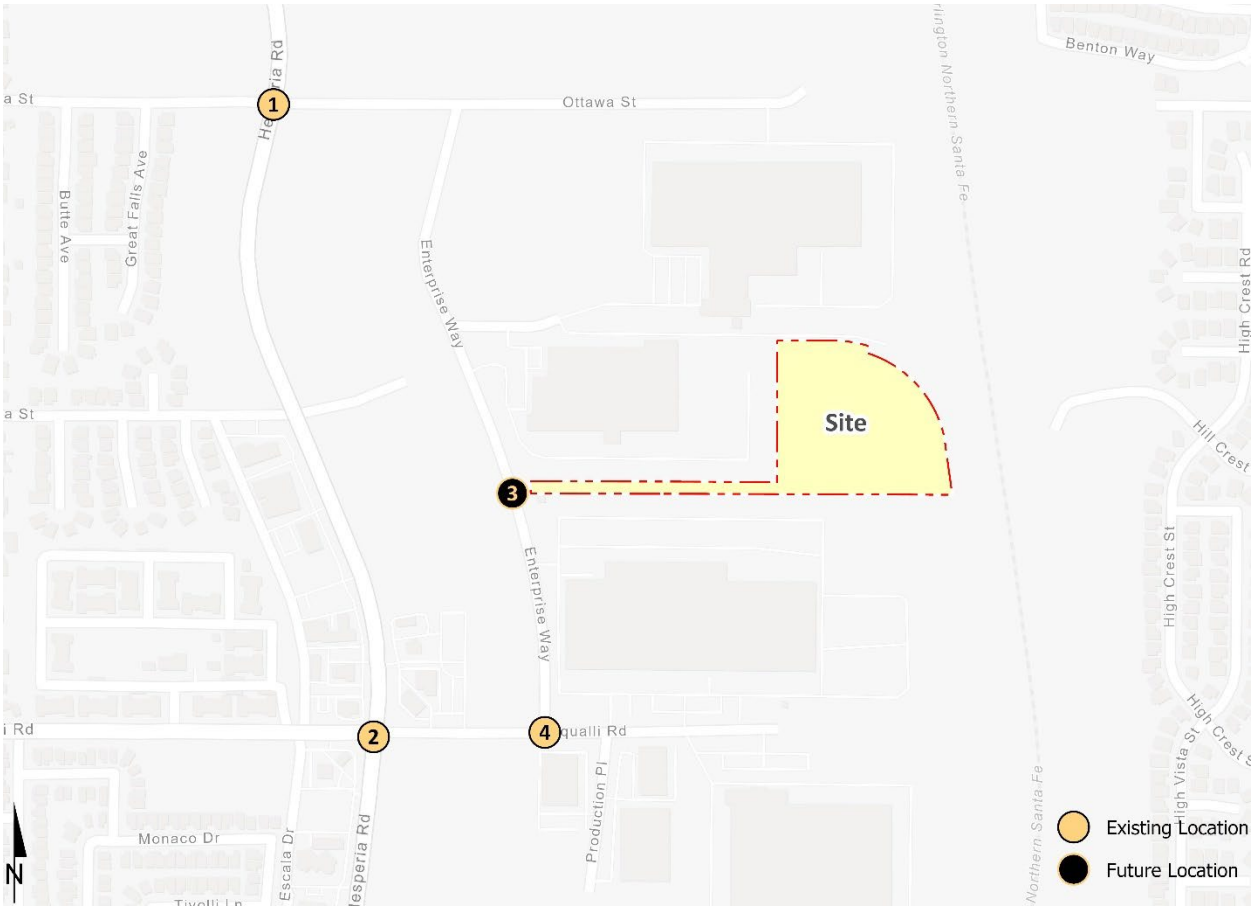
The following 4 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for this TA based on consultation with City of Victorville staff. The "50 peak hour trip" criterion generally represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of influence (i.e., study area).

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection
1	Hesperia Rd. & Ottawa St.
2	Hesperia Rd. & Nisqualli Rd.
3	Enerprise Wy. & Driveway 1
4	Enerprise Wy. & Nisqualli Rd.

The intent of the San Bernardino County Transportation Authority (SBCTA) Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. There are no study area intersections identified as a County of San Bernardino CMP location.

EXHIBIT 1-3: STUDY AREA



1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 3 *Area* Conditions, Section 5 *Opening Year Cumulative (2024) Traffic Conditions*, and Section 6 *Horizon Year (2033) Traffic Conditions* includes the detailed analysis. A summary of the Level of Service (LOS) results for all analysis scenarios is presented in Table 1-2.

TABLE 1-2: SUMMARY OF INTERSECTION LEVEL OF SERVICE BY ANALYSIS SCENARIO

		Existing 2023		2024 Without Project		2024 With Project		2033 Without Project		2033 With Project	
#	Intersection	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Hesperia Rd. & Ottawa St.	●	●	●	●	●	●	●	●	●	●
2	Hesperia Rd. & Nisqualli Rd.	●	●	●	●	●	●	●	●	●	●
3	Enerprise Wy. & Driveway 1	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●
4	Enerprise Wy. & Nisqualli Rd.	●	●	●	●	●	●	●	●	●	●

● = A - D ● = E ● = F

1.5.1 EXISTING (2023) CONDITIONS

The study area intersections are currently operating at an acceptable LOS during the peak hours.

1.5.2 OPENING YEAR CUMULATIVE (2024) CONDITIONS

The following study area intersection is anticipated to continue to operate at an unacceptable LOS during the peak hours:

- Hesperia Road & Ottawa Road (#1) – LOS F PM peak hour only
- Hesperia Road & Nisqualli Road (#2) – LOS E PM peak hour only

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at an unacceptable LOS during the peak hours. The addition of Project traffic is anticipated to increase the pre-project delay by less than 5.0 seconds at both locations. As such, no improvements have been recommended for the purposes of this report.

1.5.3 HORIZON YEAR (2033) CONDITIONS

The following study area intersections are anticipated to continue to operate at an unacceptable LOS under Horizon Year (2033) Without Project traffic conditions:

- Hesperia Road & Ottawa Road (#1) – LOS F AM and PM peak hours
- Hesperia Road & Nisqualli Road (#2) – LOS E AM peak hour; and LOS F PM peak hour

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at an unacceptable LOS during the peak hours. The addition of Project traffic is anticipated to increase the pre-project delay by less than 5.0 seconds at both locations. As such, no improvements have been recommended for the purposes of this report.

1.6 RECOMMENDATIONS

1.6.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS

The following recommendations are based on the improvements needed to accommodate site access. The site adjacent recommendations are shown on Exhibit 1-4. The site adjacent queuing analysis results for the site adjacent study area intersections are provided in Appendix 1.2.

Recommendation 1 – Enterprise Way & Driveway 1 (#3) – The following improvement is necessary to accommodate site access:

- Project to install driveway stop control on the westbound approach (Project Driveway) and a shared left-right turn lane.

No site adjacent roadways are proposed other than the driveway improvements identified at Driveway 1. Access to the site will be accommodated via a new 40-foot-wide driveway located between two existing industrial buildings off Enterprise Way.

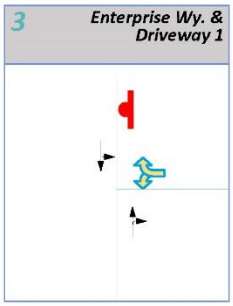
1.6.2 OFF-SITE RECOMMENDATIONS

Since the addition of Project traffic does not exceed the City's threshold of 5.0 seconds or more over the pre-project delay, no intersection improvements have been recommended. However, the Project Applicant would be required to pay fair share fees and participate in pre-existing fee programs consistent with the County's requirements (see Section 7 *Local and Regional Funding Mechanisms*).

1.7 TRUCK ACCESS AND CIRCULATION

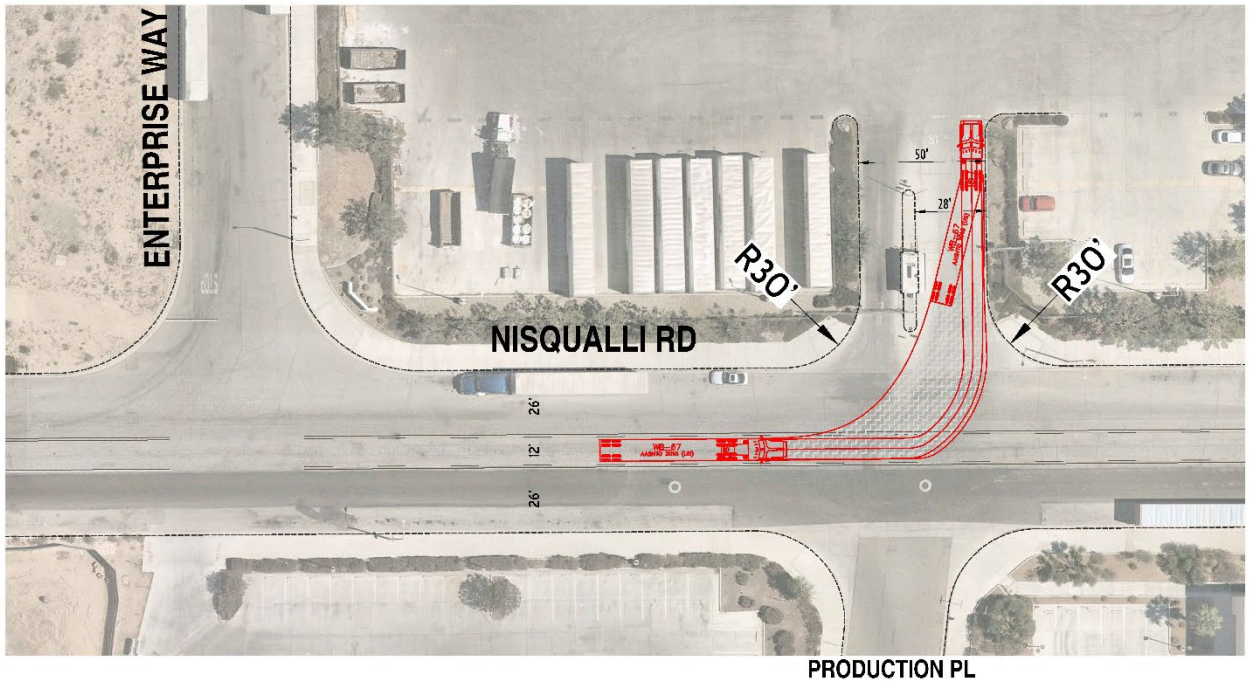
Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at the Project driveway anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5). As shown on Exhibit 1-5, the proposed Project driveways are anticipated to accommodate the wide turning radius of heavy trucks as currently designed.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



4 = Existing Intersection Analysis Location
3 = Future Intersection Analysis Location
= Stop Sign Improvement
= Existing Lane
= Lane Improvement

EXHIBIT 1-5: TRUCK TURNS



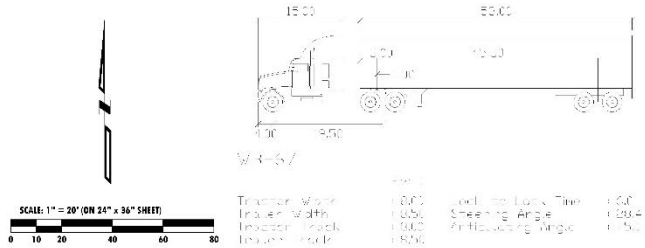


EXHIBIT A: TRUCK TURNING TEMPLATE
NISQUALLI ROAD AT ENTERPRISE WAY

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WWW.URBANXROADS.COM
TELEPHONE # 949-660-1994

2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with City of Victorville's Traffic Study Guidelines.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors, such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (4) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Victorville requires signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection's average control delay. Control delays include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0[1]
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F

Source: HCM, 6th Edition

[1] If V/C is greater than 1.0 then LOS is F per HCM.

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Customary practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (4)

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Victorville requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0[1]
Little or no delays.	0 to 10.00	A
Short traffic delays.	10.01 to 15.00	B
Average traffic delays.	15.01 to 25.00	C
Long traffic delays.	25.01 to 35.00	D
Very long traffic delays.	35.01 to 50.00	E
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F

Source: HCM, 6th Edition

[1] If V/C is greater than 1.0 then LOS is F per HCM.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by the California Department of Transportation (Caltrans) and other public agencies to quantitatively justify or determine the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (5)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (5) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions and for all future analysis scenarios for existing unsignalized intersections. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics. For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection. Urban warrants have been used as posted speed limits on the major roadways with unsignalized intersections are 40 miles per hour or below and rural warrants have been used where speeds exceed 40 miles per hour.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Similarly, the speed limit has been used as the basis for determining the use of Urban and Rural warrants. Traffic signal warrant analyses were performed for the following study area intersection shown in Table 2-3:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

#	Intersection
1	Hesperia Rd. & Ottawa St.
3	Enerprise Wy. & Driveway 1
4	Enerprise Wy. & Nisqualli Rd.

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *Opening Year Cumulative (2024) Traffic Conditions* and Section 6 *Horizon Year (2033) Traffic Conditions* of this report. It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

Minimum Acceptable LOS and associated definitions of intersection deficiencies have been obtained from each of the applicable surrounding jurisdictions.

2.4.1 CITY OF VICTORVILLE

Per the City of Victorville General Plan, the City of Victorville's current LOS standard for intersections is LOS D for peak hour intersection operations.

2.4.2 SAN BERNARDINO COUNTY CMP

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, where feasible, except where an existing LOS F condition is identified in the CMP document. However, for the purposes of this analysis, LOS D has been utilized for all study area intersections.

2.5 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies.

Signalized Intersections

The City of Victorville's traffic study guidelines are utilized in conjunction with the deficiency criteria of the County of San Bernardino's traffic study guidelines. As such, for the purposes of this traffic study and pursuant to the approved traffic study scoping agreement, the following LOS criteria from the

County's traffic study guidelines will be utilized for signalized study area intersections located within the Desert, Valley and Mountain regions of the County:

- Any signalized study intersection in the Valley or Mountain regions that is operating at an acceptable LOS D or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F shall identify improvements to improve operations to LOS D or better.
- Any signalized study intersection in the Desert region that is operating at an LOS C or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS D, E, or F shall identify improvements to improve operations to LOS C.
- Any signalized study intersection in the Valley or Mountain regions that is operating at LOS E or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.
- Any signalized study intersection in the Desert region that is operating at LOS D, E, or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

Unsignalized Intersections

The following LOS from the County's traffic study guidelines will be utilized for unsignalized study area intersections located within the Desert, Valley and Mountain regions of the County:

- The addition of project related traffic causes the intersection to degrade from an LOS D or better to a LOS E or worse in the Valley and Mountain regions or from an LOS C or better to an LOS D or worse in the Desert region.

  OR

- The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at an LOS E or F in the Valley and Mountain regions or at an LOS D, E, or F in the Desert region (per Section 10.5.2 b))

  AND

- One or both of the following conditions are met:
  - The project adds ten (10) or more trips to any approach
  - The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2 c)).

The proposed significance thresholds will be applied at study area intersections for the purposes of determining project-related deficiencies.

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3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Victorville General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of Victorville staff (Appendix 1.1), the study area includes a total of 4 existing and future study area intersections as shown previously on Exhibit 1-3. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF VICTORVILLE GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-2 shows the City of Victorville General Plan Circulation Element and Exhibit 3-3 illustrates the City of Victorville General Plan roadway cross-sections.

3.3 TRUCK ROUTES

The City of Victorville's truck routes are shown on Exhibit 3-4. Hesperia Road, Nisqualli Road, and Bear Valley Road are identified as City truck routes.

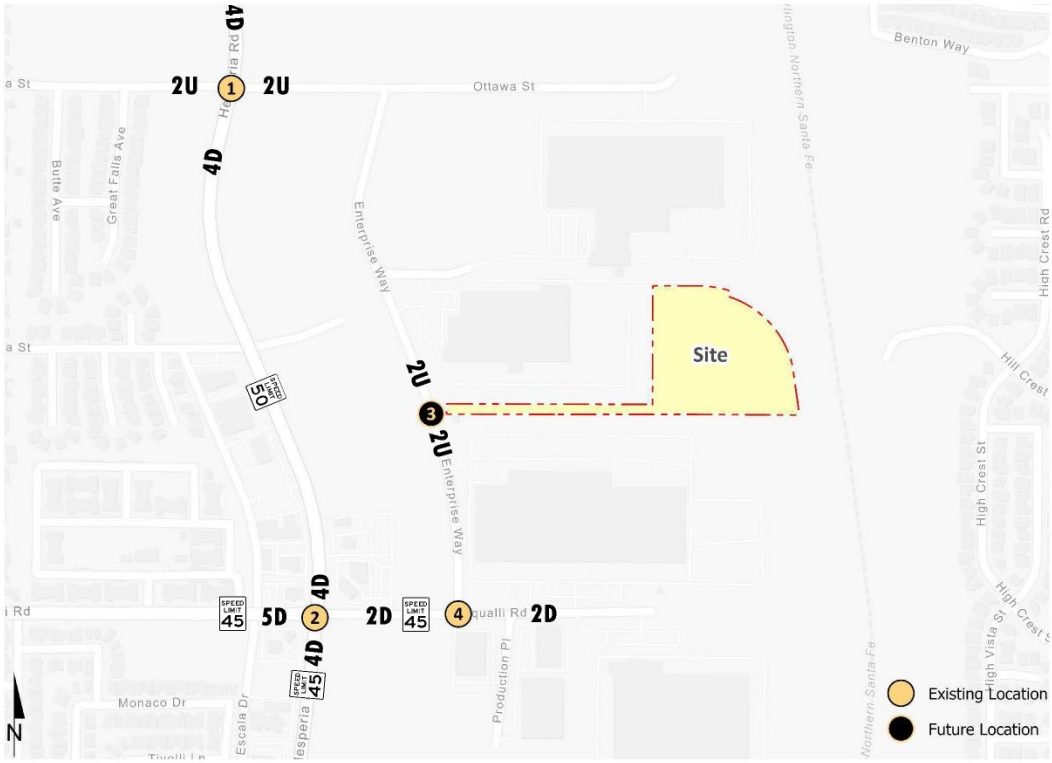
3.4 TRANSIT SERVICE

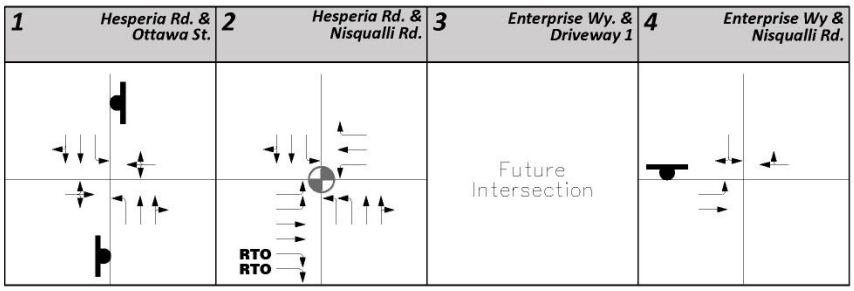
The study area is currently served by Victor Valley Transit Authority (VVTA) with bus service along Hesperia Road and Nisqualli Road. The existing transit routes within the study area are shown on Exhibit 3-5. VVTA Route 55 could potentially serve the Project which currently runs along Hesperia Road to the south of Nisqualli Road and Nisqualli Road west of Hesperia Road. Transit service is reviewed and updated by VVTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.5 BICYCLE & PEDESTRIAN FACILITIES

As shown on Exhibit 3-6, there are no pedestrian facilities in close proximity to the Project along Hesperia Road with limited pedestrian facilities along Nisqualli Road. Field observations indicate nominal pedestrian and bicycle activity within the study area.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS





2 = Number of Lanes
D = Divided
SPEED LIMIT 45 = Speed Limit (MPH)
= Traffic Signal
= Stop Sign
= Existing Lane
RTO = Right Turn Overlap

EXHIBIT 3-2: CITY OF VICTORVILLE GENERAL PLAN CIRCULATION ELEMENT

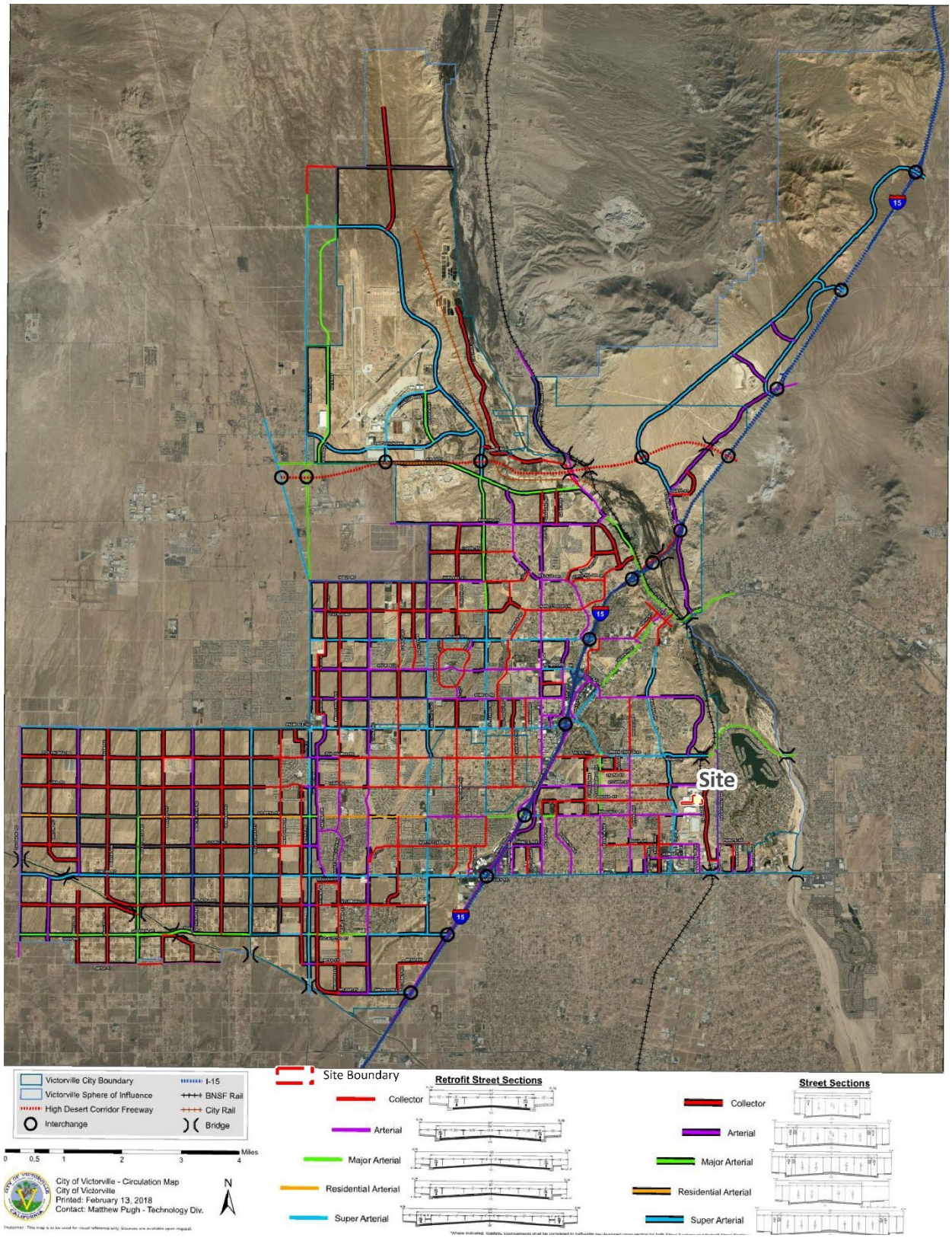
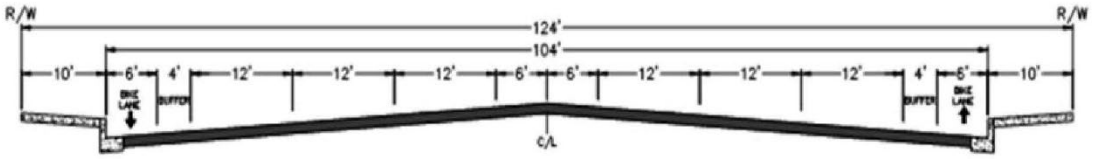
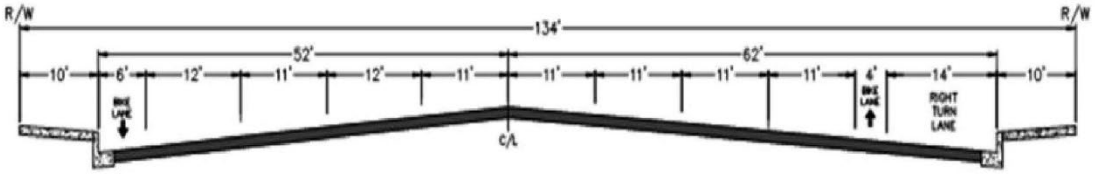


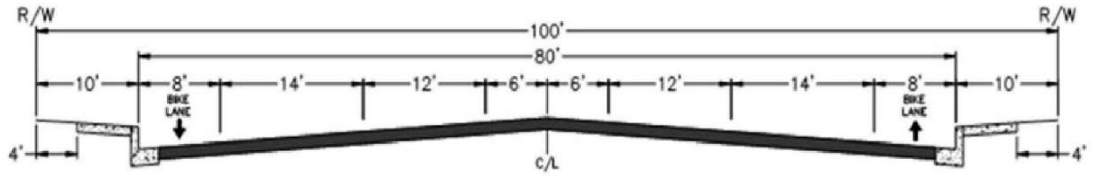
EXHIBIT 3-3: CITY OF VICTORVILLE ROADWAY CROSS-SECTIONS (PAGE 1 OF 2)



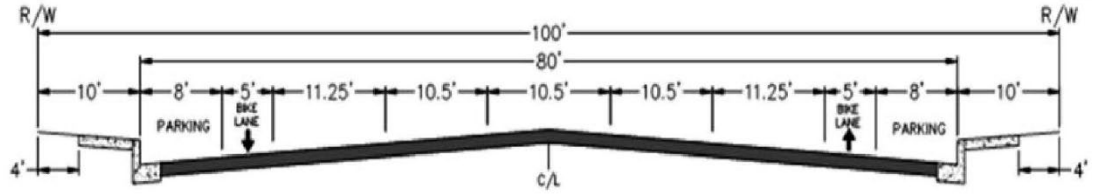
SUPER ARTERIAL
NO PARKING



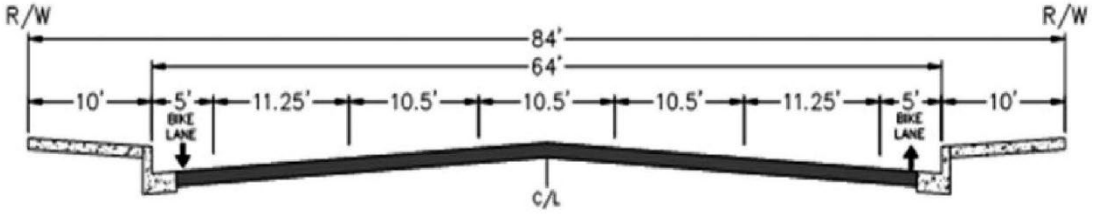
SUPER ARTERIAL AT INTERSECTIONS
WITH DUAL LEFT TURN LANES/ RIGHT TURN LANE



MAJOR ARTERIAL
NO PARKING



MAJOR ARTERIAL
WITH PARKING



ARTERIAL ROADWAY WITH CENTER
LEFT TURN LANE

EXHIBIT 3-3: CITY OF VICTORVILLE ROADWAY CROSS-SECTIONS (PAGE 2 OF 2)

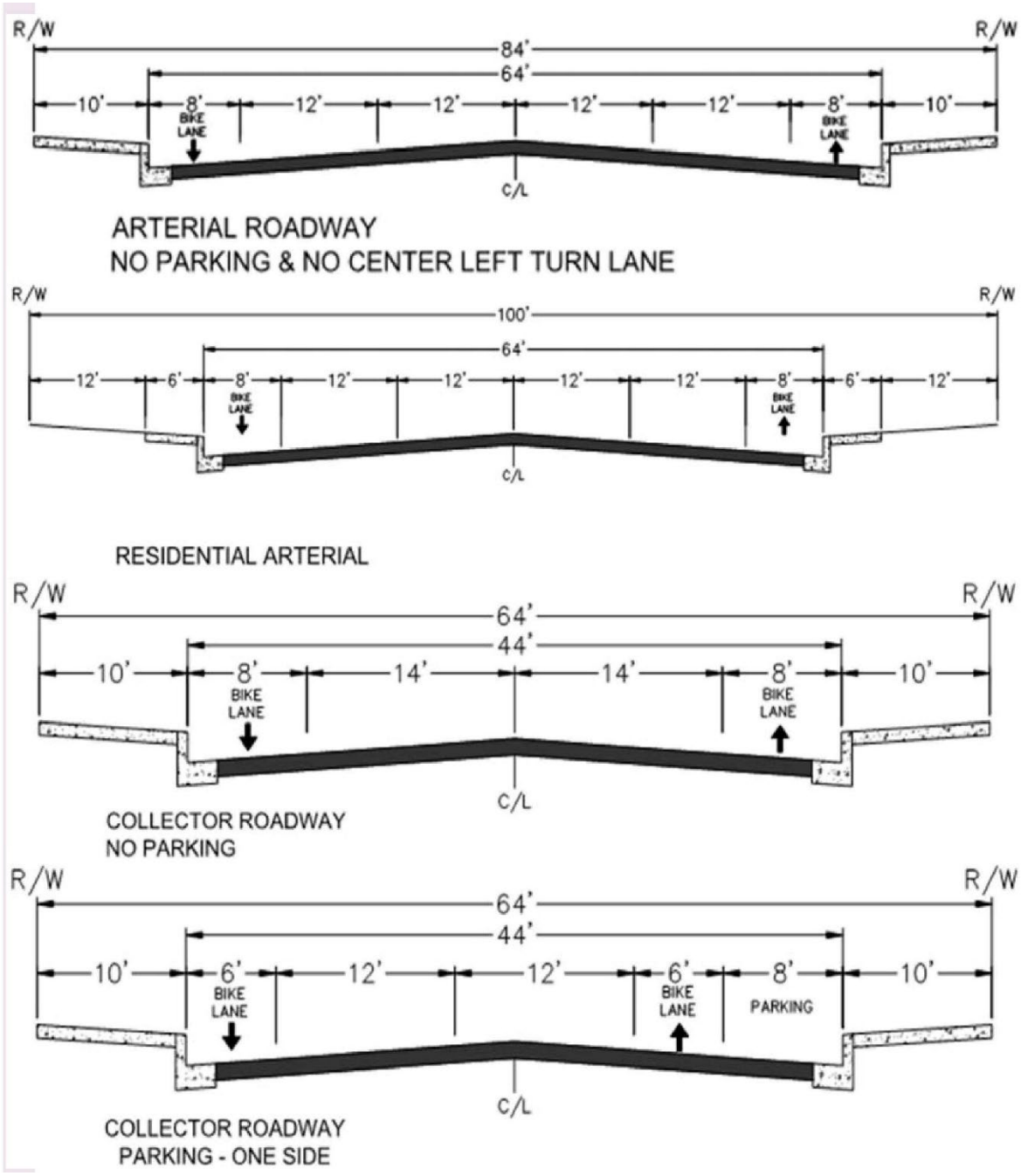


EXHIBIT 3-4: CITY OF VICTORVILLE TRUCK ROUTES

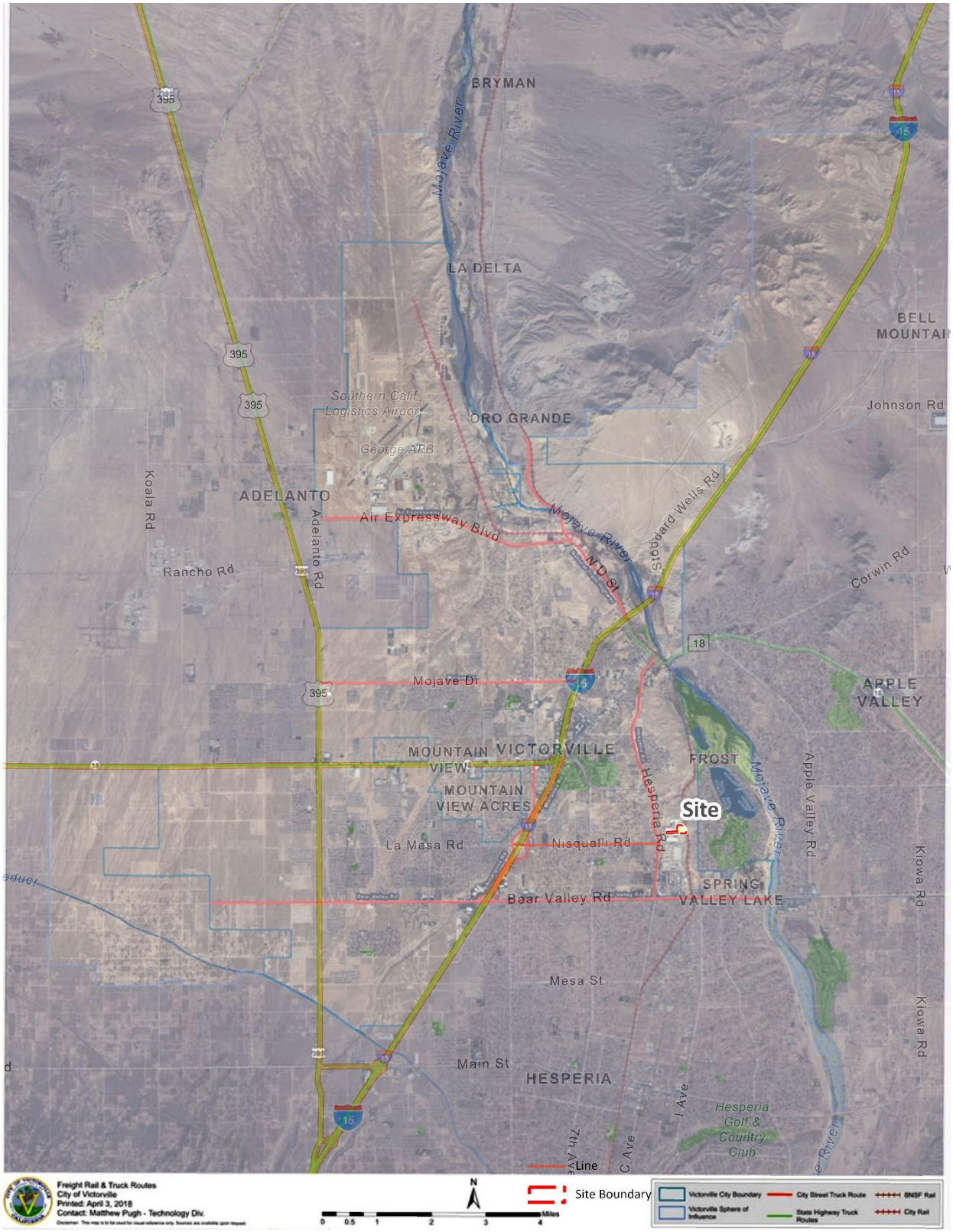


EXHIBIT 3-5: EXISTING TRANSIT ROUTES

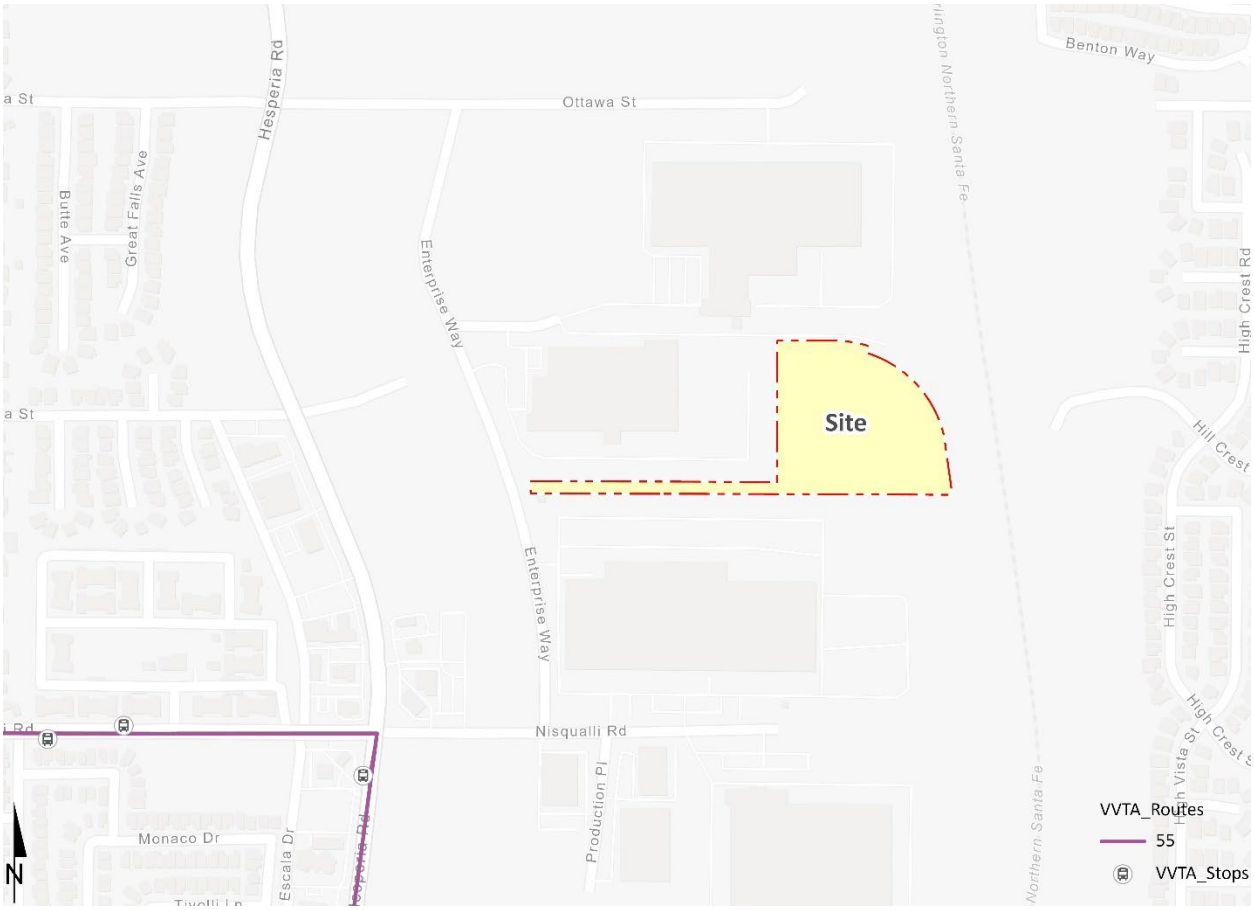
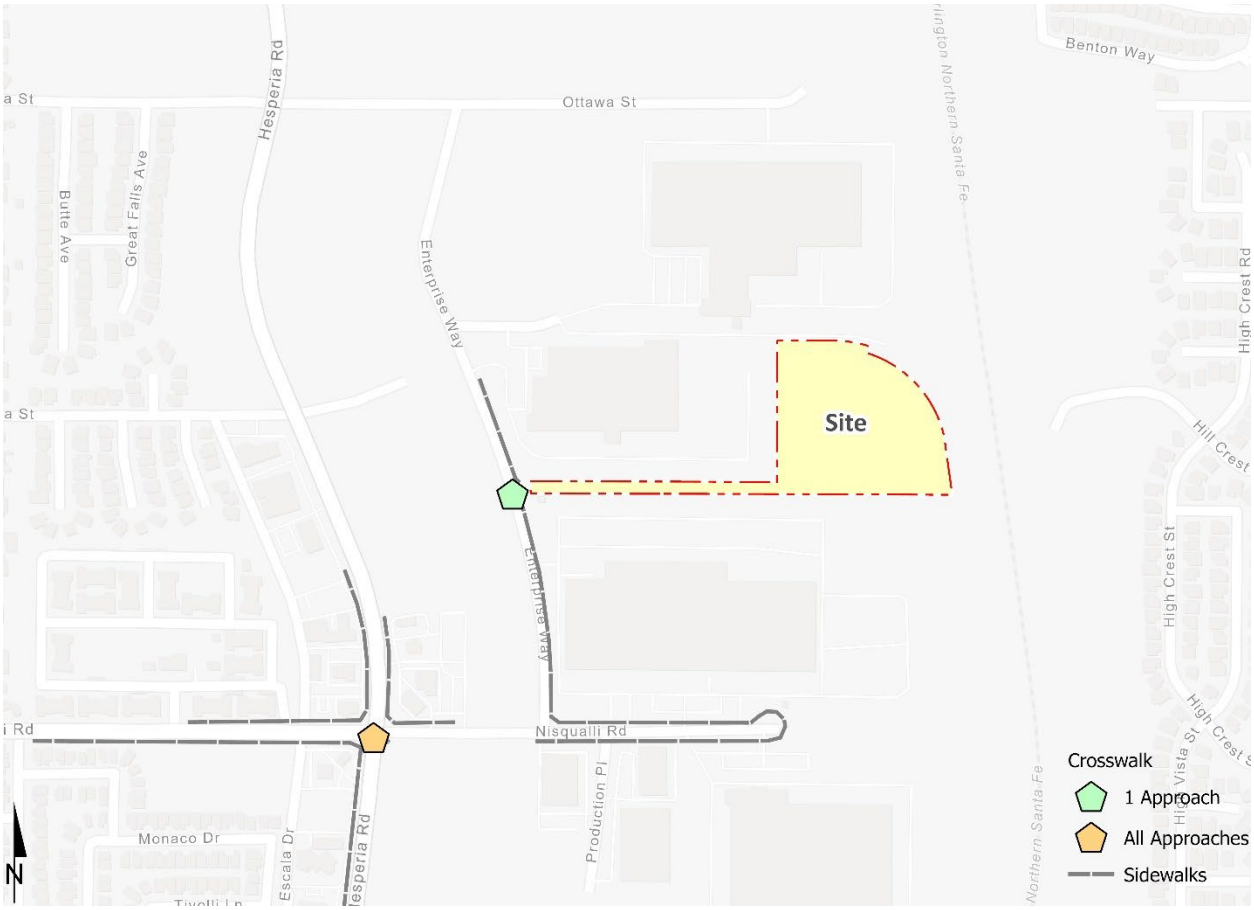


EXHIBIT 3-6: EXISTING PEDESTRIAN FACILITIES



3.6 EXISTING (2023) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in March 2023 and June 2023. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

Traffic counts were collected in March 2023 during normal operating conditions (i.e., no detours or closures associated with construction activity) when local schools were operating and in session. Although schools were not in session at the time of the June 2023 counts, the counts collected have been adjusted with up to 30% additional traffic based on differences in volume at the intersection of Hesperia Road and Nisqualli Road in March and June 2023. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. These raw turning volumes have been flow conserved between intersections with limited access, no access, and where there are currently no uses generating traffic. The traffic counts collected include the vehicle classifications as shown below:

- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

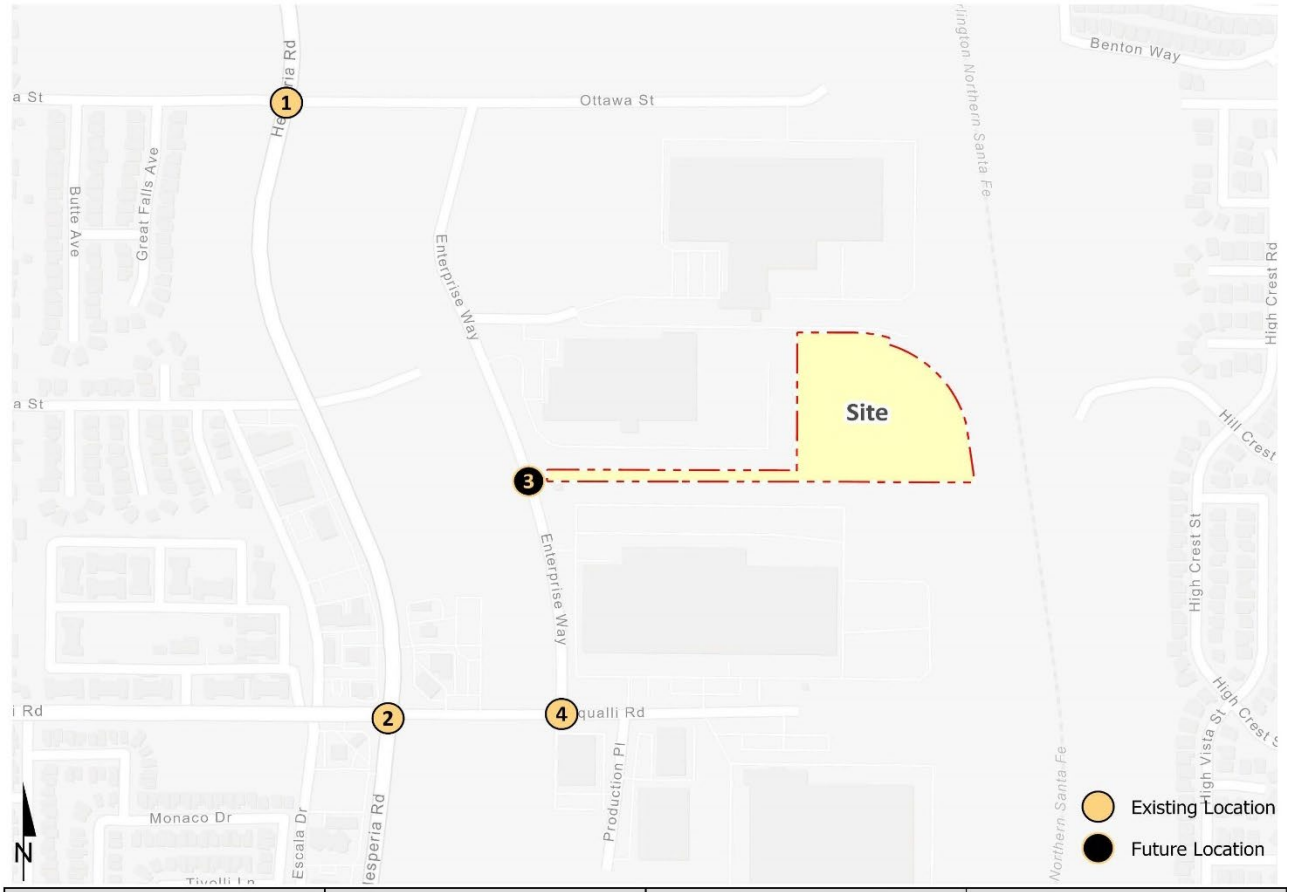
To represent the effect of large trucks, buses, and recreational vehicles have on traffic flow, all trucks were converted into PCEs. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is also much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the SBCTA CMP. (6)

Existing weekday ADT volumes, in actual vehicles, are shown on Exhibit 3-7. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 14.25 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.0 percent. As such, the above equation utilizing a factor of 14.25 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.0 percent (i.e., 1/0.07016 = 14.25) and was assumed to sufficiently estimate ADT volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes (in actual vehicles) are also shown on Exhibit 3-7 in actual vehicles. PCE volumes used for the peak hour intersection operations analyses are provided in Appendix 3.1 for all analysis scenarios.

EXHIBIT 3-7: EXISTING (2023) TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Hesperia Rd. & Ottawa Rd.	2 Hesperia Rd. & Nisqualli Rd.	3 Enterprise Wy. & Driveway 1	4 Enterprise Wy. & Nisqualli Rd.
35,100	***34,900***	***750***	***1,000***
↲ 4(8) ↓ 1123(1144) ↳ 10(6)	↲ 75(110) ↓ 949(1115) ↳ 24(19)	← 18(51)	↲ 11(47) ↳ 7(4)
↰ 4(33) ← 1(0) ↶ 1(1)	↱ 24(34) ← 31(71) ↶ 32(91)		↱ 0(10) ← 23(93)
600	***3,250***		***2,300***
7(3) ↳	136(181) ↳	↑	84(8) ↳
↰ 7(15) ↑ 986(1269) ↱ 4(0)	↰ 264(409) ↑ 908(989) ↱ 39(48)	84(18)	80(53) →
19(14) ↵	502(404) ↵		
550 ***34,800***	***17,350*** ***39,100***	***750***	***3,250***

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

3.7 INTERSECTION OPERATIONS ANALYSIS

Existing (2023) conditions peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1, which indicates that the study area intersections are currently operating at an acceptable LOS during the peak hours. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2023) CONDITIONS

#	Intersection	Traffic Control[1]	Delay[2] (secs.) AM	Delay[2] (secs.) PM	Level of Service AM	Level of Service PM
1	Hesperia Rd. & Ottawa St.	CSS	21.0	17.5	C	C
2	Hesperia Rd. & Nisqualli Rd.	TS	28.6	41.0	C	D
3	Enerprise Wy. & Driveway 1		Future Intersection			
4	Enerprise Wy. & Nisqualli Rd.	CSS	9.2	9.5	A	A

1 TS = Traffic Signal; CSS = Cross-Street Stop

2 Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

3.8 TRAFFIC SIGNAL WARRANTS ANALYSIS

There is currently no existing unsignalized study area intersection anticipated to warrant a traffic signal (see Appendix 3.3).

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. ~~The Project is proposing to develop a truck and trailer parking/drop lot on 10.04 gross acres. The site currently accommodates 112 truck and trailer parking stalls and proposes a total of 198 13.5 foot by 60 foot truck and trailer parking stalls (resulting in a net increase of 86 trailer parking stalls). The portion of the site that will be developed with the new trailer stalls is currently vacant and will be developed as an expansion to an existing industrial building located on the northeast corner of Enterprise Way and Nisqualli Road.~~ Access to the site will be accommodated via a new 40-foot-wide driveway located between two existing industrial buildings on Enterprise Way. Access will also be accommodated through the existing industrial building located on the northeast corner of Enterprise Way and Nisqualli Road. Regional access to the Project site will be provided by the I-15 Freeway via Nisqualli Road.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development and is based upon the specific land uses planned for a given project. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

4.1.1 PROPOSED PROJECT

The latest ITE Trip Generation Manual (11th Edition, 2021) does not currently have any trip generation rates for a truck and trailer parking/drop lot, as such, trip generation rates for the proposed Project have been developed based on the average of data collected at three other facilities with operations similar to those proposed. (3) Table 4-1 summarizes the count data collected at each existing facility and the actual counts are included in Appendix 1.1.

TABLE 4-1: EXISTING EMPIRICAL DATA (DRIVEWAY COUNTS)

Existing Surveyed Sites	Quantity	Units	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Trip Generation Summary of Existing Uses:									
1938 5th Street, San Bernardino[1]	130	Spaces							
Passenger Cars:			0	0	0	4	3	7	99
2-axle Trucks:			1	1	2	0	0	0	4
3-axle Trucks:			2	3	5	3	3	6	85
4+-axle Trucks:			1	4	5	7	1	8	115
Total Trucks (Actual Vehicles)			4	8	12	10	4	14	204
1938 5th St. Total Trips (Actual Vehicles)			**4**	**8**	**12**	**14**	**7**	**21**	**303**
602 W. Agua Mansa Road, Colton[2]	252	Spaces							
Passenger Cars:			3	3	6	2	12	14	124
2-axle Trucks:			1	1	2	0	0	0	3
3-axle Trucks:			6	13	19	16	7	23	250
4+-axle Trucks:			13	4	17	2	5	7	177
Total Trucks (Actual Vehicles)			20	17	37	18	11	29	429
602 W. Agua Mansa Rd. Total Trips (Actual Vehicles)			**23**	**19**	**42**	**20**	**23**	**43**	**553**
11215 Riverside Dr., Jurupa Valley[3]	320	Spaces							
Passenger Cars:			12	7	19	10	16	26	353
2-axle Trucks:			3	4	7	3	0	3	59
3-axle Trucks:			2	2	4	3	5	8	105
4+-axle Trucks:			4	5	9	5	5	10	135
Total Trucks (Actual Vehicles)			9	11	20	11	10	21	299
11215 Riverside Dr. Total Trips (Actual Vehicles)			**21**	**18**	**39**	**21**	**26**	**47**	**652**

[1] Data presented based on driveway counts conducted on February 8, 2022.

[2] Data presented based on driveway counts conducted on November 16, 2021.

[3] Data presented based on driveway counts conducted on March 30, 2021.

Table 4-2 shows the average trip generation rates for the existing facilities which have been developed based on the number of trailer parking spaces at each site shown on Table 4-1. The weighted trip generation rates were calculated by dividing the sum of the total trips for all three sites by the sum of the total number of trailer parking spaces for all sites.

Trip generation rates have also been calculated in PCE on Table 4-2. The PCE factors are consistent with the recommended PCE factors in the City's Guidelines and with those used for other projects within the City.

TABLE 4-2: CALCULATED TRIP GENERATION RATES

		AM Peak Hour			PM Peak Hour			
Land Use	Units	In	Out	Total	In	Out	Total	Daily
Actual Vehicles:[1]								
Trailer Parking/Drop Lot	Spaces							
Passenger Cars:		0.021	0.014	0.035	0.023	0.044	0.067	0.821
2-axle Trucks:		0.007	0.008	0.015	0.004	0.000	0.004	0.094
3-axle Trucks:		0.014	0.025	0.039	0.031	0.021	0.052	0.626
4+-axle Trucks:		0.026	0.018	0.043	0.020	0.015	0.035	0.608
Passenger Car Equivalent (PCE):								
Trailer Parking/Drop Lot	Spaces							
Passenger Cars:		0.021	0.014	0.035	0.023	0.044	0.067	0.821
2-axle Trucks (PCE = 1.5):		0.011	0.012	0.022	0.006	0.000	0.006	0.141
3-axle Trucks (PCE = 2.0):		0.028	0.050	0.078	0.063	0.041	0.104	1.252
4+-axle Trucks (PCE = 3.0):		0.077	0.053	0.130	0.060	0.045	0.105	1.823

[1] Weighted average trip generation rate developed from empirical data summarized on Table 1.

Based on the calculated trip generation rates shown on Table 4-2, the trip generation is summarized on Table 4-3 for the existing use based on the current 112-space truck and trailer parking/drop lot. As shown on Table 4-3, the existing use currently generates a total of 242 two-way trip-ends per day with 16 AM peak hour trips and 18 PM peak hour trips (in actual vehicles).

Refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in the City's Guidelines. As shown on Table 4-3, the existing use currently generates a total of 452 two-way PCE trip-ends per day with 30 PCE AM peak hour trips and 33 PCE PM peak hour trips. The peak hour intersection operations analyses conducted for the purposes of this traffic study have utilized the PCE-based trip generation.

TABLE 4-3: EXISTING TRIP GENERATION SUMMARY

Land Use	Quantity Units	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles								
Existing Trailer Parking/Drop Lot	112 Spaces							
Passenger Cars:		2	2	4	3	5	8	92
2-axle Trucks:		1	1	2	0	0	0	12
3-axle Trucks:		2	3	5	4	2	6	70
4+-axle Trucks:		3	2	5	2	2	4	68
Total Trucks (Actual Vehicles)		6	6	12	6	4	10	150
Total Project Trips (Actual Vehicles)		**8**	**8**	**16**	**9**	**9**	**18**	**242**
Passenger Car Equivalent (PCE)								
Existing Trailer Parking/Drop Lot	112 Spaces							
Passenger Cars:		2	2	4	3	5	8	92
2-axle Trucks (PCE = 1.5):		1	1	2	1	0	1	16
3-axle Trucks:		3	6	9	7	5	12	140
4+-axle Trucks:		9	6	15	7	5	12	204
Total Trucks (PCE)		13	13	26	15	10	25	360
Total Project Trips (PCE)		**15**	**15**	**30**	**18**	**15**	**33**	**452**

Based on the calculated trip generation rates shown on Table 4-2, the Project trip generation at Project Buildout (with 198 trailer parking spaces) is summarized on Table 4-4. As shown on Table 4-4, the Project at Project Buildout is anticipated to generate a total of 426 two-way trip-ends per day with 27 AM peak hour trips and 32 PM peak hour trips (in actual vehicles). Similarly, the Project is anticipated to generate a total of 800 two-way PCE trip-ends per day with 53 PCE AM peak hour trips and 56 PCE PM peak hour trips.

TABLE 4-4: PROJECT BUILDOUT TRIP GENERATION

		AM Peak Hour			PM Peak Hour			
Land Use	Quantity Units	In	Out	Total	In	Out	Total	Daily
Actual Vehicles								
Trailer Parking/Drop Lot	198 Spaces							
Passenger Cars:		4	3	7	5	9	14	162
2-axle Trucks:		1	2	3	1	0	1	20
3-axle Trucks:		3	5	8	6	4	10	124
4+-axle Trucks:		5	4	9	4	3	7	120
Total Trucks (Actual Vehicles)		9	11	20	11	7	18	264
Total Project Trips (Actual Vehicles)		**13**	**14**	**27**	**16**	**16**	**32**	**426**
Passenger Car Equivalent (PCE)								
Trailer Parking/Drop Lot	198 Spaces							
Passenger Cars:		4	3	7	5	9	14	162
2-axle Trucks (PCE = 1.5):		2	2	4	1	0	1	28
3-axle Trucks:		6	10	16	12	8	20	248
4+-axle Trucks:		15	11	26	12	9	21	362
Total Trucks (PCE)		23	23	46	25	17	42	638
Total Project Trips (PCE)		**27**	**26**	**53**	**30**	**26**	**56**	**800**

Note: Proposed Project trip generation includes the existing 112 stalls. As such, the net increase in stalls is 86.

Table 4-5 summarizes the net change in trip generation for the proposed Project associated with the additional 86 trailer parking stalls (above the 112 existing trailer stalls for a total of 198 trailer parking stalls). As shown on Table 4-5, the Project is anticipated to generate 184 net new two-way trip-ends per day with 11 net new AM peak hour trips and 14 net new PM peak hour trips (in actual vehicles). Similarly, the Project is anticipated to generate 348 net new two-way PCE trip-ends per day with 23 net new PCE AM peak hour trips and 23 net new PCE PM peak hour trips. The peak hour intersection operations analysis utilizes the net new trip generation shown in Table 4-5 as the existing activity is captured in the traffic counts.

TABLE 4-5: NET NEW PROJECT TRIP GENERATION

	AM Peak Hour			PM Peak Hour			
Trip Generation Comparison	In	Out	Total	In	Out	Total	Daily
Actual Vehicles:							
Existing Use							
Passenger Cars:	2	2	4	3	5	8	92
Trucks (Actual Vehicles):	6	6	12	6	4	10	150
Total Existing:	8	8	16	9	9	18	242
Proposed Project							
Passenger Cars:	4	3	7	5	9	14	162
Trucks (Actual Vehicles):	9	11	20	11	7	18	264
Total Proposed Project:	13	14	27	16	16	32	426
Net Change in Trips							
Passenger Cars:	2	1	3	2	4	6	70
Trucks (Actual Vehicles):	3	5	8	5	3	8	114
Net Change in Trips:	**5**	**6**	**11**	**7**	**7**	**14**	**184**
Passenger Car Equivalent:							
Existing Use							
Passenger Cars:	2	2	4	3	5	8	92
Trucks (PCE):	13	13	26	15	10	25	360
Total Existing:	15	15	30	18	15	33	452
Proposed Project							
Passenger Cars:	4	3	7	5	9	14	162
Trucks (PCE):	23	23	46	25	17	42	638
Total Proposed Project:	27	26	53	30	26	56	800
Net Change in Trips							
Passenger Cars:	2	1	3	2	4	6	70
Trucks (PCE):	10	10	20	10	7	17	278
Net Change in Trips:	**12**	**11**	**23**	**12**	**11**	**23**	**348**

Note: Positive trips reflects net increase in trips from the existing use.

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the route where the Project traffic would distribute. Distribution patterns are based on existing and planned land uses in the area along with the planned circulation system. Exhibit 4-1 illustrates the passenger car trip distribution patterns for the Project. Exhibit 4-2 illustrates the truck trip distribution patterns for the Project.

EXHIBIT 4-1: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

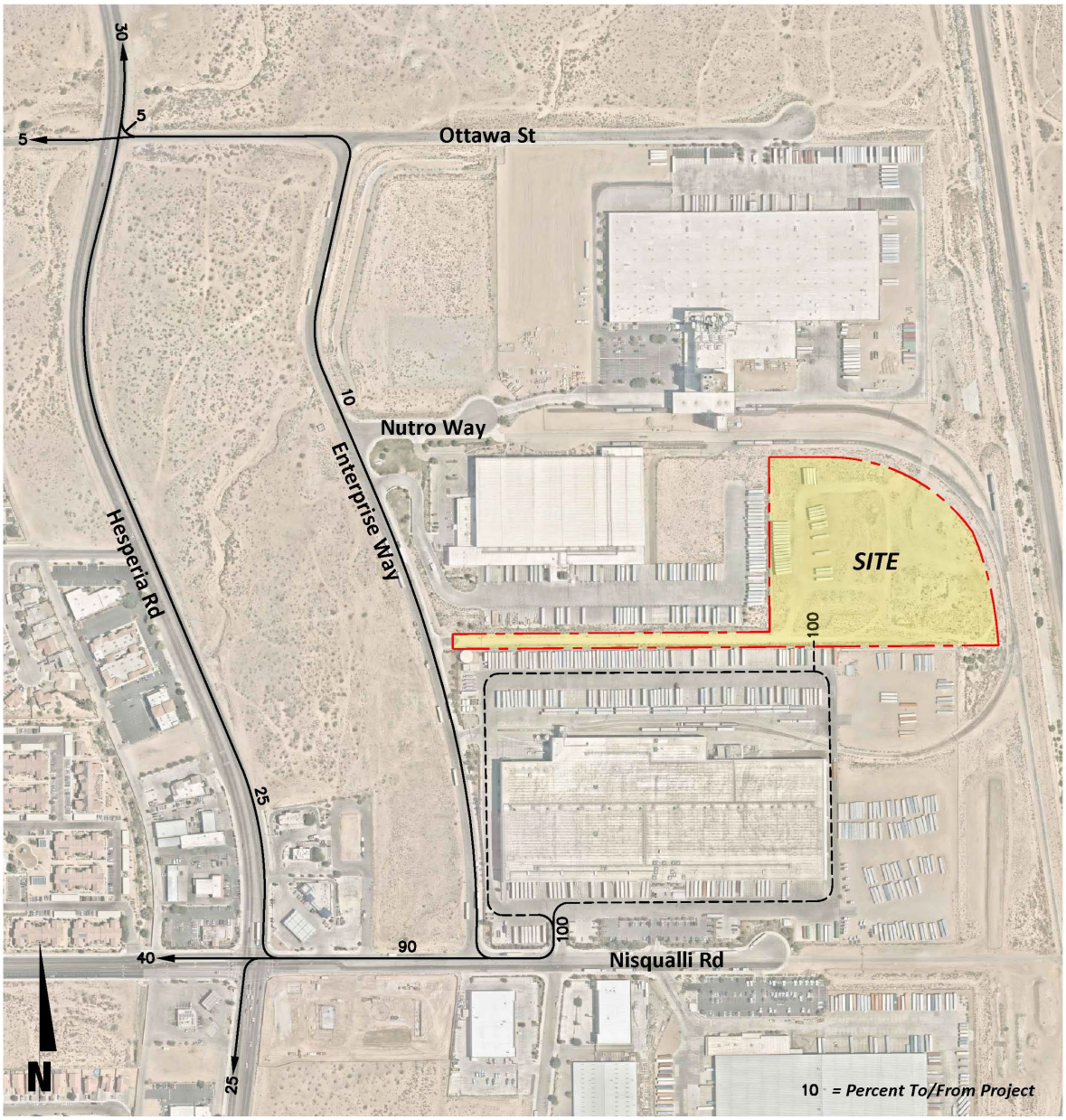
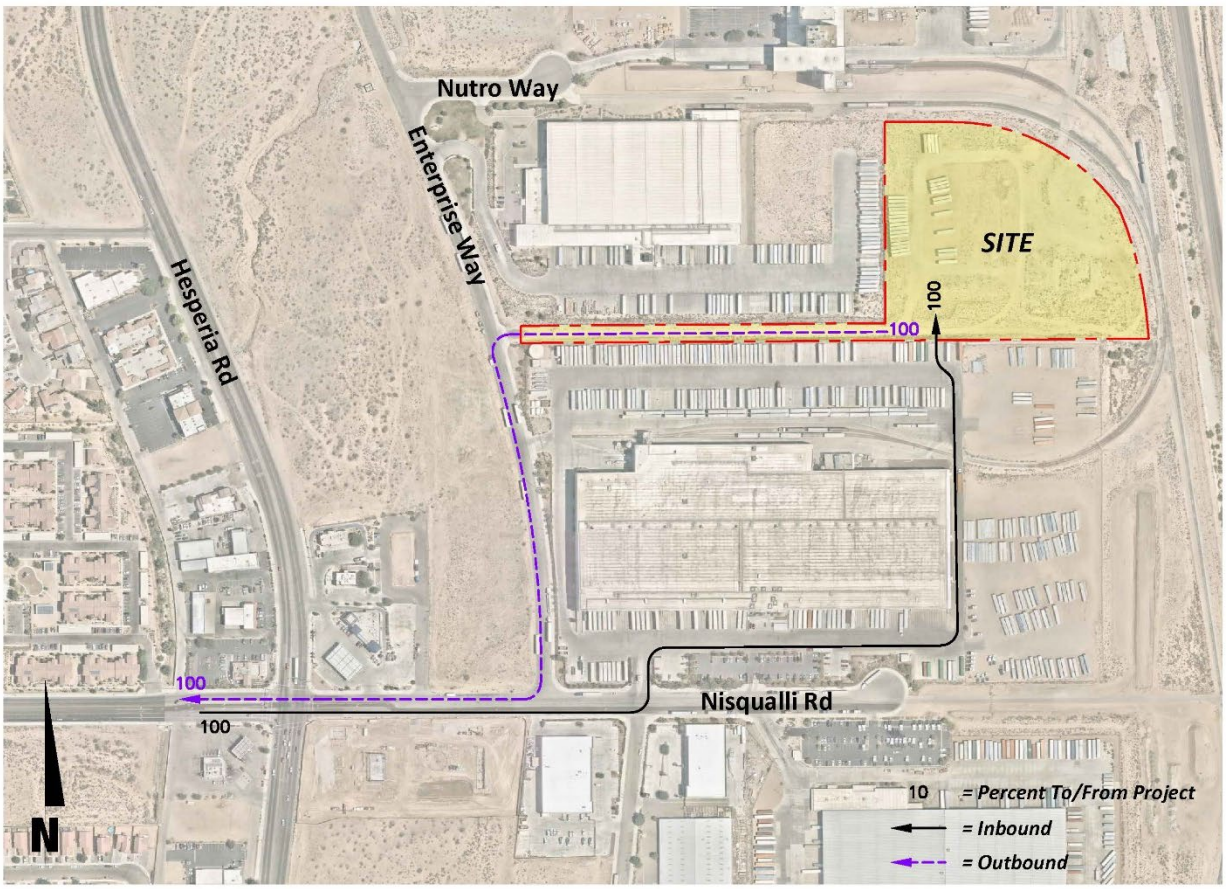


EXHIBIT 4-2: PROJECT (TRUCK) TRIP DISTRIBUTION



4.3 MODAL SPLIT

The potential for Project trips to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes (employee or non-truck trips only).

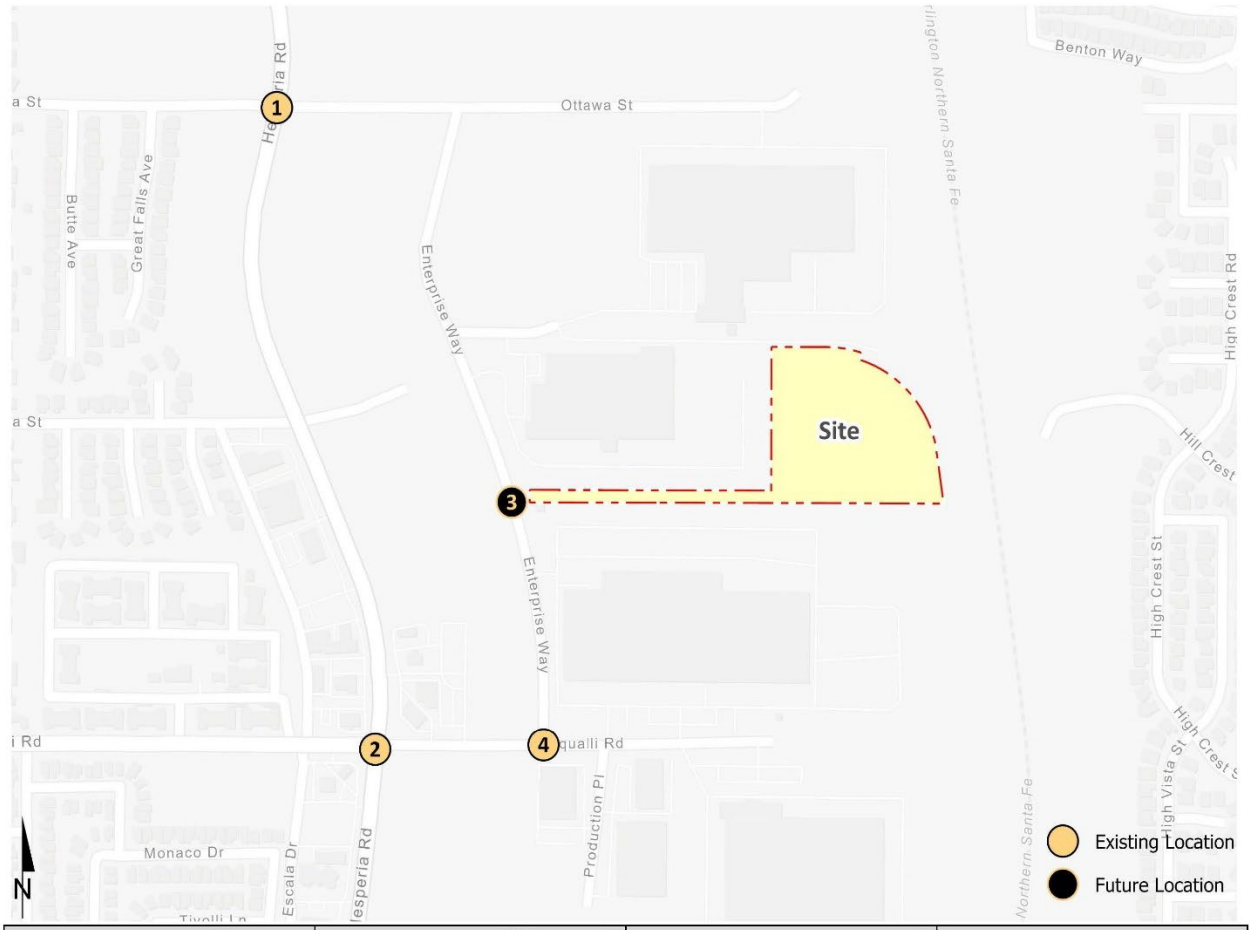
4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation (associated with the net increase in trailer stalls), trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-3 in actual vehicles.

4.5 BACKGROUND TRAFFIC

Horizon year traffic forecasts have been based upon background (ambient) growth at 2.0% per year, compounded annually. The total ambient growth is 2.0% for 2024 traffic conditions and 21.90% for 2033 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. The traffic generated by the proposed Project is manually added to the base volume to determine Opening Year Cumulative and Horizon Year forecasts.

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Hesperia Rd. & Ottawa Rd.	2 Hesperia Rd. & Nisqualli Rd.	3 Enterprise Wy. & Driveway 1	4 Enterprise Wy. & Nisqualli Rd.
0(1) ↑	200 ↰ 0(1) ← 5(5) ↰ 0(1) 5(6) → ↱ 1(1) 150	Nominal ↰ 5(3) Nominal 200	150 Nominal 5(3) ↲ ← 1(4) 6(7) →

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

The traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2024) Without Project
  - Existing 2023 volumes
  - Ambient growth traffic (2.0%)
  - Cumulative Development traffic
- Opening Year Cumulative (2024) With Project
  - Existing 2023 volumes
  - Ambient growth traffic (2.0%)
  - Cumulative Development traffic
  - Project Traffic
- Horizon Year (2033) Without Project
  - Existing 2023 volumes
  - Ambient growth traffic (21.90%)
  - Cumulative Development traffic
- Horizon Year (2033) With Project
  - Existing 2023 volumes
  - Ambient growth traffic (21.90%)
  - Cumulative Development traffic
  - Project Traffic

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Victorville. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. Exhibit 4-4 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-6. If applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative (2024) forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-6 is reflected as part of the background traffic. In an effort to conduct a conservative analysis, the cumulative projects are added in conjunction with the ambient growth identified in Section 4.5 *Background Traffic*. Cumulative ADT and peak hour intersection turning movement volumes, in actual vehicles, are shown on Exhibit 4-5 for near-term traffic conditions.

TABLE 4-6: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

No.	Project Name	Address/Location	Land Use[1]	Quantity	Units[2]
V1	Ottawa Business Center	N of Ottawa St. & E of Hesperia	High-Cube Cold Storage Warehouse	200.000	TSF
			High-Cube Fulfillment Center Warehouse	796.520	TSF
V2	Single-Family Residential (ADMN22-00073)	E of Arrowhead Dr. at Pablo Ct.	Single-Family Residential	15	DU
V3	Single-Family Residential (PLAN21-00039)	W of Tamarisk Rd. & Btwn. Pahute Av. & Huerta St.	Single-Family Residential	38	DU
V4	Bear Valley Marketplace	NEC of Third Av. & Bear Valley Rd.	Gas Station w/ Convenience Market	16	VFP
			Fast Food with Drive Thru	11.000	TSF
			Shopping Center	62.090	TSF
			Medical Offices	10.080	TSF
			Multi-Family Residential	376	DU
			General Office Building	10.000	TSF
			Mini-Warehouse	139.090	TSF
V5	Warehouse & Distribution Center (PLAN22-00004)	SEC of Ottawa St. & Enterprise Wy.	Warehousing	18.000	TSF
V6	Single-Family Residential (PLAN17-00027)	W of Cypress Av. & Btwn. Ottawa St. & Nisqualli Rd.	Single-Family Residential	66	DU
V7	Senior Citizen Single-Family Residential (PLAN22-00016)	NEC of Nisqualli Rd. & Ninth Av.	Senior Adult Housing - Single-Family	110	DU
V8	Ground-Up Gas Station with C-Store & Car Wash	SEC of Hesperia Rd. & Nisqualli Rd.	Gas Station w/ Convenience Market	16	VFP
			Truck Stop	8	VFP
V9	Dog Treat Manufacturing Warehouse	SEC of Hesperia Rd. & Nisqualli Rd.	Dog Treat Manufacturing Warehouse	218.972	TSF

[1] TSF = Thousand Square Feet; DU = Dwelling Units; VFP = Vehicle Fueling Positions

4.7 NEAR-TERM CONDITIONS

The "buildup" approach has been utilized which combines existing traffic counts with a background ambient growth factor to forecast the Opening Year Cumulative (2024) traffic conditions. An ambient growth factor of 2.0% accounts for background (area-wide) traffic increases that occur over time up to the year 2024 from the year 2023 (2 percent over a 1-year period). Project traffic is added to assess Opening Year Cumulative (2024) With Project traffic conditions. Traffic volumes generated by cumulative development projects are included to assess the Opening Year Cumulative (2024) Without Project and With Project traffic conditions. The 2024 roadway networks are similar to the existing conditions roadway network with the exception of future intersections and driveways proposed to be developed by the Project.

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP

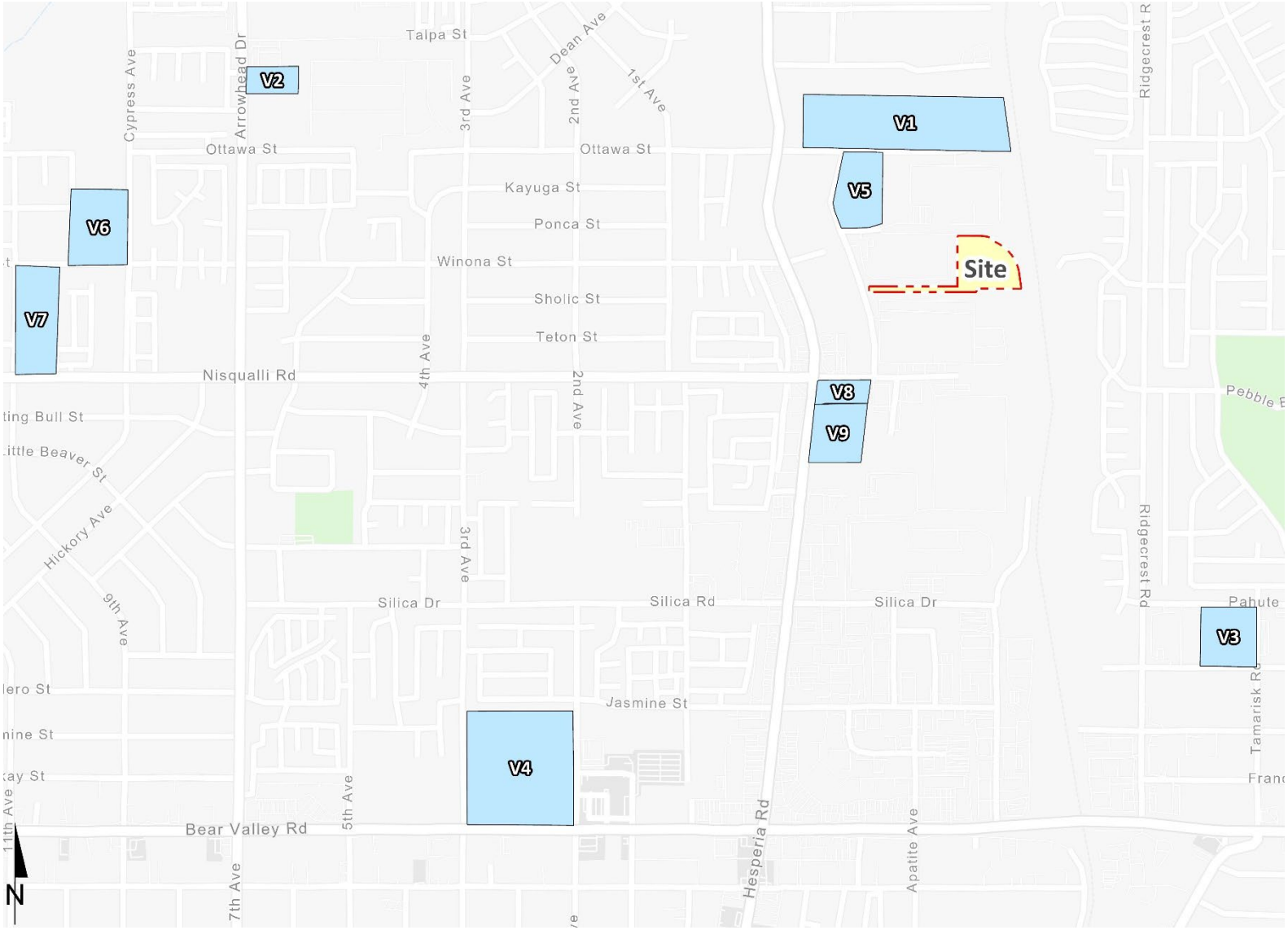
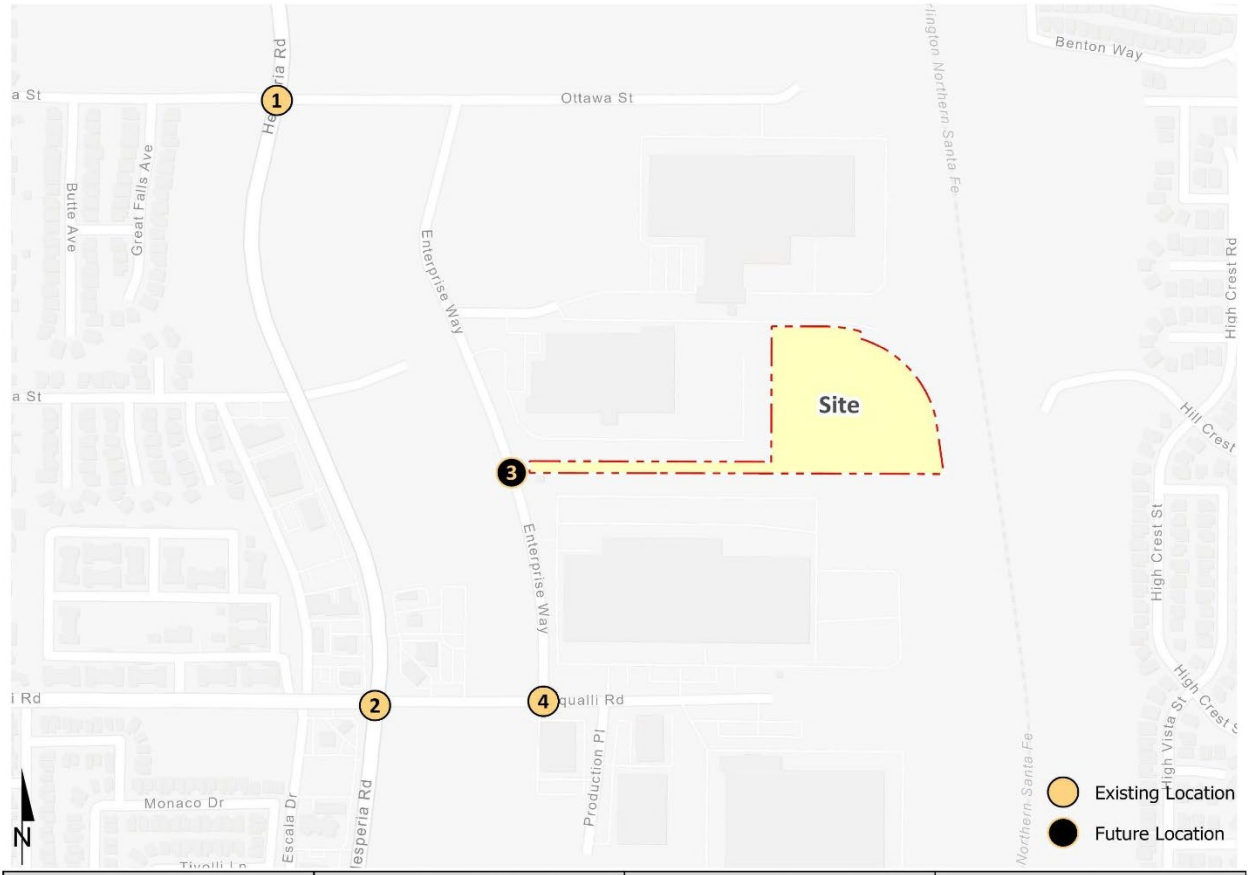


EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Hesperia Rd. & Ottawa Rd.	2 Hesperia Rd. & Nisqualli Rd.	3 Enterprise Wy. & Driveway 1	4 Enterprise Wy. & Nisqualli Rd.
1,300 / 2,150	4,850 / 5,450		
← 25(27) ↳ 23(11) / ↰ 7(29) ← 1(5) ↰ 19(77)	↲ 17(65) ↓ 66(98) ↳ 58(65) / ↰ 58(65) ← 91(94) ↰ 42(47)		
4(2) → / ↑ 20(38) ↱ 66(30)	57(27) ↳ 87(100) → 22(19) ↲ / ↰ 7(39) ↑ 57(74)		
100 / 2,350	4,850 / 3,000		

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

4.8 HORIZON YEAR (2033) CONDITIONS

The "buildup" approach has been utilized which combines existing traffic counts with a background ambient growth factor to forecast the Horizon Year (2033) traffic conditions. An ambient growth factor of 21.90% accounts for background (area-wide) traffic increases that occur over time up to the year 2033 from the year 2023 (2 percent compounded over a 10-year period). Project traffic is added to assess Horizon Year (2033) With Project traffic conditions. Traffic volumes generated by cumulative development projects are included to assess the Horizon Year (2033) Without Project and With Project traffic conditions. The 2033 roadway networks are similar to the existing conditions roadway network with the exception of future intersections and driveways proposed to be developed by the Project.

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5 OPENING YEAR CUMULATIVE (2024) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Opening Year Cumulative (2024) traffic conditions and the resulting intersection operations and traffic signal warrant analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2024) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place (e.g., intersection and roadway improvements at the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place (e.g., intersection and roadway improvements along the cumulative development's frontages).

5.2 OPENING YEAR CUMULATIVE (2024) TRAFFIC VOLUME FORECASTS

Opening Year Cumulative (2024) Without Project includes Existing traffic volumes plus an ambient growth factor of 2.0% and the addition of traffic generated by cumulative development projects.

Opening Year Cumulative (2024) With Project includes Existing traffic volumes plus an ambient growth factor of 2.0%, the addition of traffic generated by cumulative development projects, and the addition of Project traffic. The weekday ADT and weekday peak hour intersection turning movement volumes, in actual vehicles, which can be expected for Opening Year Cumulative (2024) Without Project and With Project traffic conditions are shown on Exhibits 5-1 and 5-2, respectively.

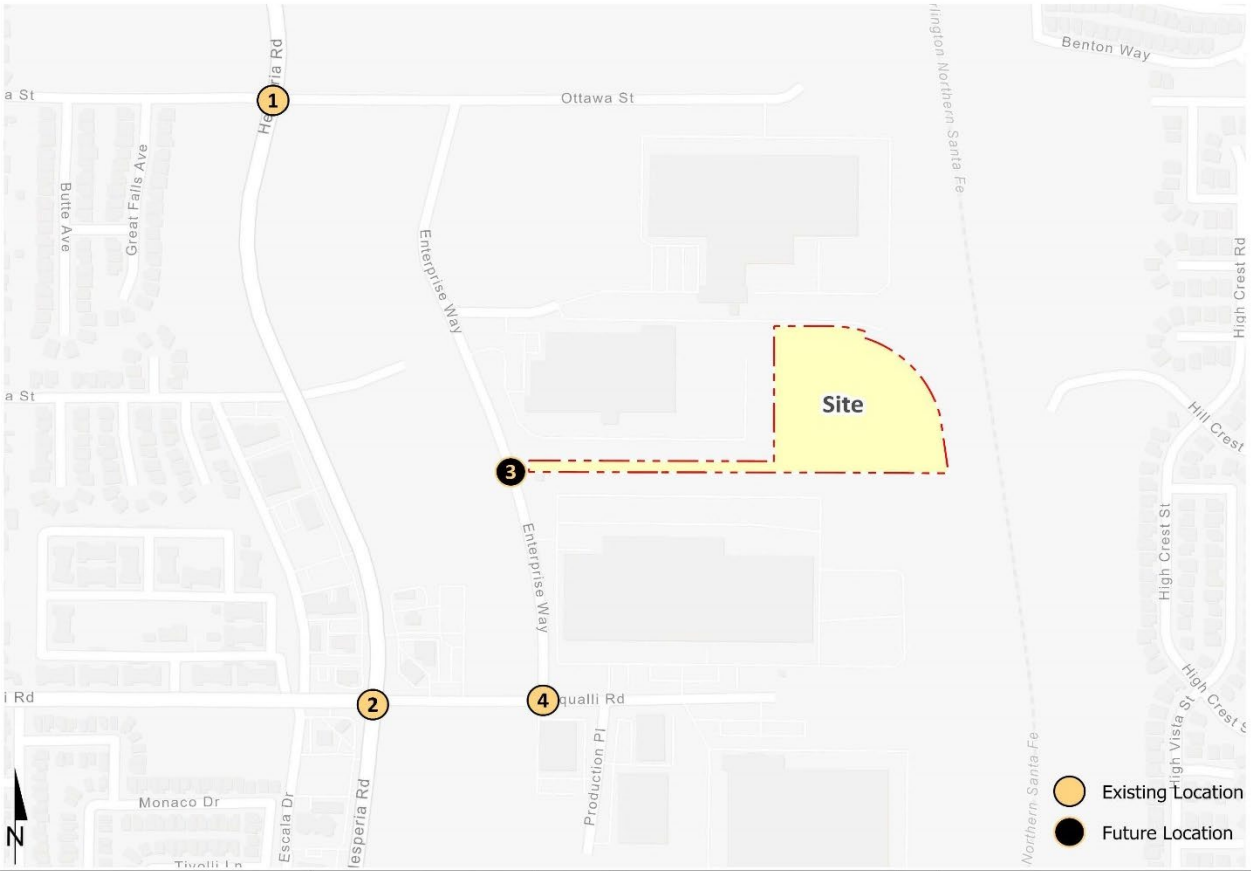
5.3 INTERSECTION OPERATIONS ANALYSIS

Opening Year Cumulative (2024) conditions peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1 for Opening Year Cumulative (2024) Without Project traffic conditions, which indicates that the following study area intersection is anticipated to continue to operate at an unacceptable LOS during the peak hours:

- Hesperia Road & Ottawa Road (#1) – LOS F PM peak hour only
- Hesperia Road & Nisqualli Road (#2) – LOS E PM peak hour only

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at an unacceptable LOS during the peak hours. The intersection operations analysis worksheets for Opening Year Cumulative (2024) Without Project and With Project traffic conditions are included in Appendices 5.1 and 5.2, respectively.

EXHIBIT 5-1: OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Hesperia Rd. & Ottawa Rd.

	4(8) ↲	1170(1193) ↓	33(17) ↳
7(3) →			
4(2) →			
20(14) ↲			
↰ 7(16)	↑ 1026(1332)	↱ 70(30)	
	↰ 11(63)	↑ 2(5)	↱ 20(78)

37,100 | 2,700 | 650 | 37,850

2 Hesperia Rd. & Nisqualli Rd.

	94(177) ↲	1034(1235) ↓	82(86) ↳
196(212) →			
146(143) →			
534(431) ↲			
↰ 276(456)	↑ 983(1083)	↱ 40(49)	
	↰ 82(100)	↑ 123(166)	↱ 75(140)

40,450 | 8,700 | 22,550 | 42,900

3 Enterprise Wy. & Driveway 1

18(52) ↓	
	↑ 85(18)

800 | 800 | 800

4 Enterprise Wy. & Nisqualli Rd.

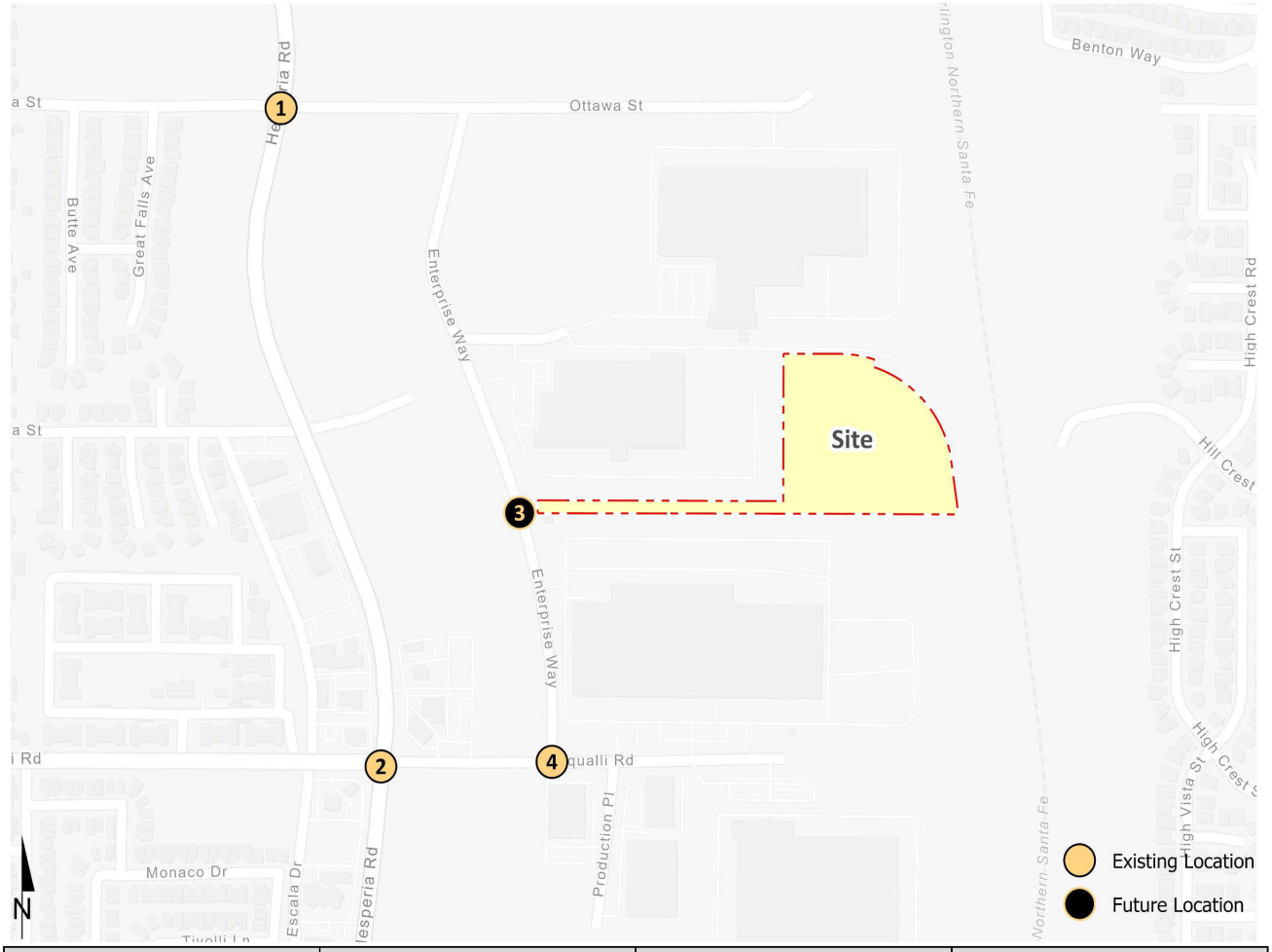
	11(48) ↲	7(4) ↳
85(8) →		
81(54) →		
	↰ 0(10)	← 24(95)

1,000 | 2,350 | 3,300

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

EXHIBIT 5-2: OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Hesperia Rd. & Ottawa Rd.	2 Hesperia Rd. & Nisqualli Rd.	3 Enterprise Wy. & Driveway 1	4 Enterprise Wy. & Nisqualli Rd.
37,150	***40,450***	***800***	***1,050***
4(8) ↲ 1170(1193) ↓ 33(17) ↳	94(177) ↲ 1034(1235) ↓ 82(86) ↳	18(52) ↓	16(51) ↲ 7(4) ↳
2,700	***8,900***	***Nominal***	***2,450***
↱ 11(63)	↱ 82(101)		↱ 0(10)
← 2(5)	← 128(171)		← 25(99)
↰ 20(78)	↰ 75(141)	↰ 5(3)	
7(3) ↳	196(212) ↳	↑	85(8) ↳
4(2) →	151(149) →	85(18)	87(61) →
20(14) ↲	534(431) ↲		
↰ 7(16) ↑ 1026(1333) ↱ 70(30)	↰ 276(456) ↑ 983(1083) ↱ 41(50)		
37,900	***42,900***	***850***	
650	***22,700***		***3,450***

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

TABLE 5-1: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2024) CONDITIONS

#	Intersection	Traffic Control [1]	2024 Without Project Delay[2] (secs.) AM	2024 Without Project Delay[2] (secs.) PM	2024 Without Project Level of Service AM	2024 Without Project Level of Service PM	2024 With Project Delay[2] (secs.) AM	2024 With Project Delay[2] (secs.) PM	2024 With Project Level of Service AM	2024 With Project Level of Service PM	Change in Delay[3] AM	Change in Delay[3] PM	Project-Related Deficiency?[4]
1	Hesperia Rd. & Ottawa St.	CSS	34.8	**>100.0**	D	**F**	34.8	**>100.0**	D	**F**	0.0	0.0	No
2	Hesperia Rd. & Nisqualli Rd.	TS	45.9	**72.5**	D	**E**	46.0	**72.7**	D	**E**	0.1	0.2	No
3	Enerprise Wy. & Driveway 1	**CSS**	Future Intersection				9.2	9.0	A	A	--	--	No
4	Enerprise Wy. & Nisqualli Rd.	CSS	9.2	9.5	A	A	9.1	9.6	A	A	--	--	No

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] TS = Traffic Signal; CSS = Cross-Street Stop; **CSS** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] Change in delay calculated for intersections operating at a deficient LOS only.

[4] Project-related traffic deficiency occurs when the Project increases the delay by 5.0 seconds or more.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The intersection of Hesperia Road at Ottawa Street is anticipated to meet peak hour volume-based traffic signal warrants under Opening Year Cumulative (2024) Without Project traffic conditions (see Appendix 5.3). There are no additional intersections anticipated to meet either peak hour or planning level ADT volume-based traffic signal warrants under Opening Year Cumulative (2024) With Project traffic conditions (see Appendix 5.4).

5.5 PROJECT DEFICIENCIES AND IMPROVEMENTS

As shown on Table 5-1, the addition of Project traffic is anticipated to increase the pre-project delay by less than 5.0 seconds at both locations. As such, no improvements have been recommended for the purposes of this report.

6 HORIZON YEAR (2033) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Horizon Year (2033) conditions and the resulting intersection operations and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2033) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year (2033) conditions (e.g., intersection and roadway improvements at the Project's frontage and driveways).
- Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area.

6.2 HORIZON YEAR (2033) TRAFFIC VOLUME FORECASTS

Horizon Year (2033) Without Project includes Existing traffic volumes plus an ambient growth factor of 21.90% and the addition of cumulative development traffic. Horizon Year (2033) With Project includes Existing traffic volumes plus an ambient growth factor of 21.90%, the addition of cumulative development traffic, and the addition of Project traffic. The weekday ADT, weekday AM, and PM peak hour volumes, in actual vehicles, which can be expected for Horizon Year (2033) Without Project and With Project traffic conditions are shown on Exhibits 6-1 and 6-2, respectively.

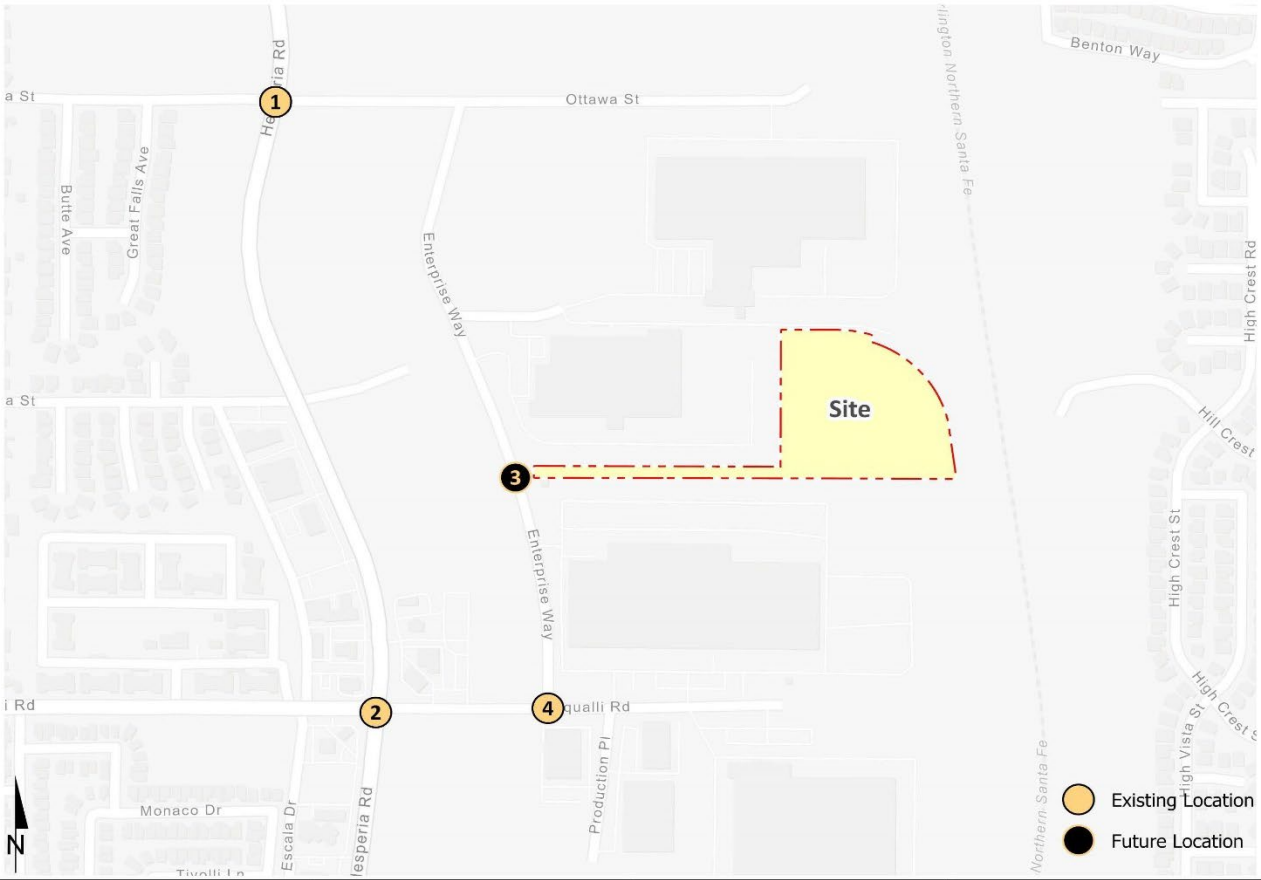
6.3 INTERSECTION OPERATIONS ANALYSIS

Horizon Year (2033) conditions peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1 for Horizon Year (2033) Without Project traffic conditions, which indicates that the following study area intersection is anticipated to continue to operate at an unacceptable LOS during the peak hours:

- Hesperia Road & Ottawa Road (#1) – LOS F AM and PM peak hours
- Hesperia Road & Nisqualli Road (#2) – LOS E AM peak hour; and LOS F PM peak hour

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at an unacceptable LOS during the peak hours. The intersection operations analysis worksheets for Horizon Year (2033) Without Project and With Project traffic conditions are included in Appendices 6.1 and 6.2, respectively.

EXHIBIT 6-1: HORIZON YEAR (2033) WITHOUT PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)

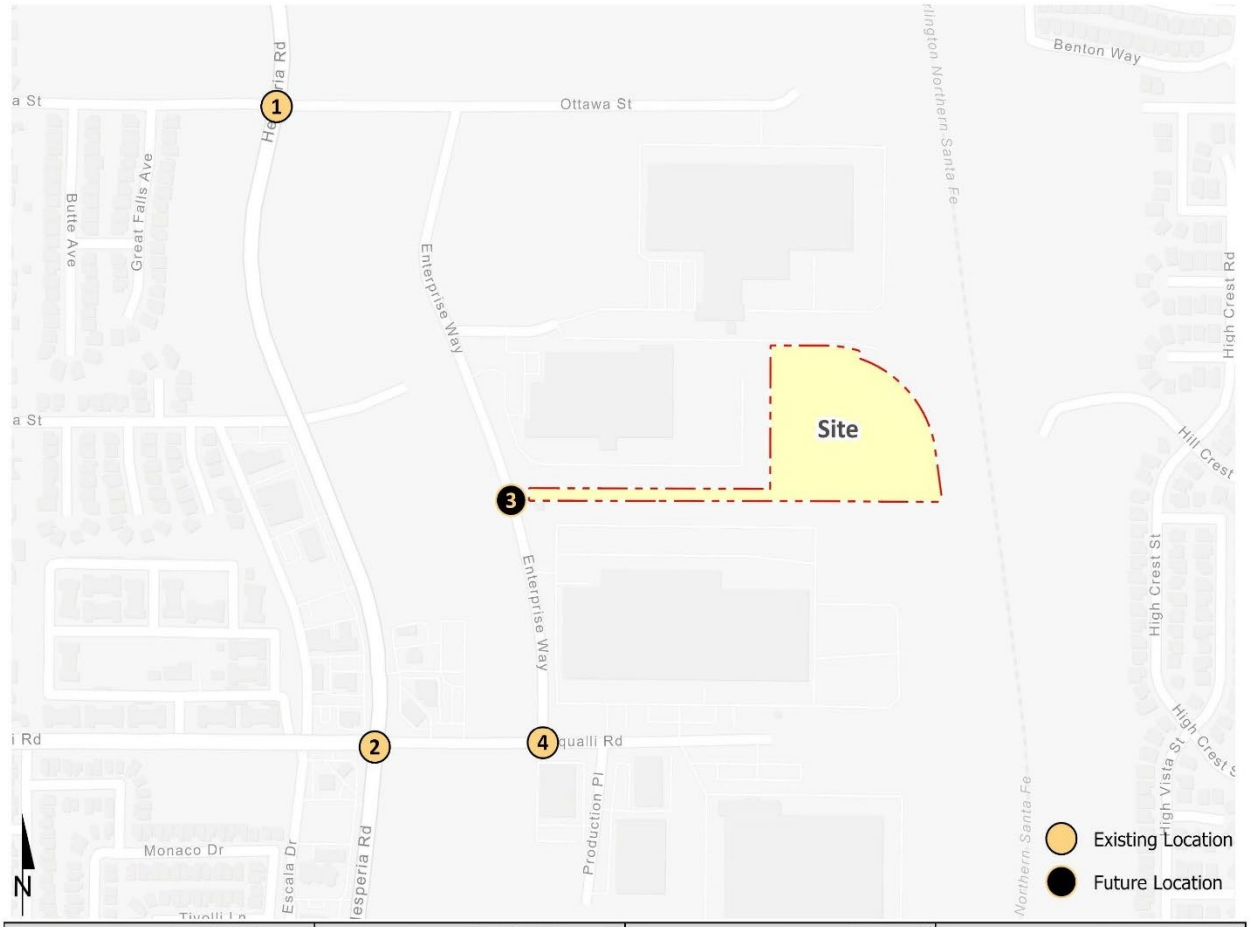


1 Hesperia Rd. & Ottawa Rd.	2 Hesperia Rd. & Nisqualli Rd.	3 Enterprise Wy. & Driveway 1	4 Enterprise Wy. & Nisqualli Rd.
44,100 / 2,850	47,400 / 9,350	950	1,200 / 2,800
5(9) ↲ 1394(1421) ↓ 35(19) ↳	108(199) ↲ 1223(1457) ↓ 87(90) ↳	22(62) ↓	13(57) ↲ 8(5) ↳
12(69) ← 3(5) ← 21(79) ←	87(106) ← 129(181) ← 81(158) ←		0(12) ← 28(113) ←
8(3) → 4(2) → 23(17) →	223(248) → 158(151) → 634(511) →	102(22) →	102(9) → 97(65) →
8(19) ↰ 1222(1585) ↑ 71(30) ↱	329(538) ↰ 1164(1280) ↑ 48(59) ↱		
750 / 44,800	26,000 / 50,650	950	3,950

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

EXHIBIT 6-2: HORIZON YEAR (2033) WITH PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Hesperia Rd. & Ottawa Rd.			2 Hesperia Rd. & Nisqualli Rd.			3 Enterprise Wy. & Driveway 1		4 Enterprise Wy. & Nisqualli Rd.	
44,100		2,850	47,400		9,550	950	Nominal	1,250	2,900
5(9) ↲	1394(1421) ↓	35(19) ↳	108(199) ↲	1223(1457) ↓	87(90) ↳	22(62) ↓	5(3) ↰	18(60) ↲	8(5) ↳
		↱ 12(69)			↱ 87(107)				↱ 0(12)
		← 3(5)			← 134(186)				← 29(117)
		↰ 21(79)			↰ 81(159)				
8(3) ↳		↰	223(248) ↳		↰		↑	102(9) ↳	
4(2) →		↑ 1222(1586)	163(157) →		↑ 1164(1280)		↑ 102(22)	103(72) →	
23(17) ↴		↱ 71(30)	634(511) ↴		↱ 49(60)				
750		44,800	26,150		50,700		1,000	4,100	

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

TABLE 6-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2033) CONDITIONS

#	Intersection	Traffic Control [1]	2033 Without Project Delay[2] (secs.) AM	2033 Without Project Delay[2] (secs.) PM	2033 Without Project Level of Service AM	2033 Without Project Level of Service PM	2033 With Project Delay[2] (secs.) AM	2033 With Project Delay[2] (secs.) PM	2033 With Project Level of Service AM	2033 With Project Level of Service PM	Change in Delay[3] AM	Change in Delay[3] PM	Project-Related Deficiency?[4]
1	Hesperia Rd. & Ottawa St.	CSS	**54.4**	**>100.0**	**F**	**F**	**54.4**	**>100.0**	**F**	**F**	0.0	0.0	No
2	Hesperia Rd. & Nisqualli Rd.	TS	**74.3**	**119.9**	**E**	**F**	**75.0**	**119.9**	**E**	**F**	0.7	0.0	No
3	Enerprise Wy. & Driveway 1	**CSS**	Future Intersection				9.3	9.1	A	A	--	--	No
4	Enerprise Wy. & Nisqualli Rd.	CSS	9.4	9.8	A	A	9.2	9.9	A	A	--	--	No

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] TS = Traffic Signal; CSS = Cross-Street Stop; **CSS** = Improvement

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] Change in delay calculated for intersections operating at a deficient LOS only.

[4] Project-related traffic deficiency occurs when the Project increases the delay by 5.0 seconds or more.

6.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no additional unsignalized intersections anticipated to meet either a peak hour or planning level ADT volume-based traffic signal warrant under Horizon Year (2033) Without and With Project traffic conditions (see Appendix 6.3 and Appendix 6.4, respectively).

6.5 PROJECT DEFICIENCIES AND IMPROVEMENTS

As shown on Table 6-1, the addition of Project traffic is anticipated to increase the pre-project delay by less than 5.0 seconds at both locations. As such, no improvements have been recommended for the purposes of this report.

7 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Victorville are funded through a combination of improvements constructed by the Project, development impact fee programs or fair share contributions. Fee programs applicable to the Project are described below.

7.1 CITY OF VICTORVILLE DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The City of Victorville adopted the latest update to their DIF program in June 2022. Fees from new residential, commercial, and industrial development are collected to fund Measure "I" compliant regional facilities as well as local facilities. Under the City's DIF program, the City may grant developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

After the City's DIF fees are collected, they are placed in a separate restricted use account pursuant to the requirements of Government Code sections 66000 et seq. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds. The City's DIF program establishes a timeline to fund, design, and build the improvements.

7.2 MEASURE "I" FUNDS

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I", a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by SBCTA and concluded that each jurisdiction should include a regional fee component in their local programs to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in September 2017. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study.

While Measure "I" is a self-executing sales tax administered by SBCTA, it bears discussion here because the funds raised through Measure "I" have funded in the past, and will continue to fund, new transportation facilities in San Bernardino County, including within the City of Victorville.

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8 REFERENCES

1. **City of Victorville.** *General Guidelines For Conducting Traffic Studies and Determination of Intersection Level of Service and Improvement Needs.* Victorville : s.n., January 20, 2005.
2. **San Bernardino County.** *Transportation Impact Study Guidelines.* San Bernardino County : s.n., July 9, 2019.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
5. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014, Updated March 30, 2021 (Revision 6).
6. **San Bernardino County Transportation Authority.** *Congestion Management Program for County of San Bernardino.* County of San Bernardino : s.n., Updated 2016.

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