URBAN | CROSSROADS

SAN LEANDRO INDUSTRIAL

TRAFFIC ANALYSIS

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Reference Number	Agency	Date
14334-09 TA Report	City of San Leandro	September 1, 2022

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(1)	Reference
ABAG	Association of Bay Area Governments
AC Transit	Alameda-Contra Costa Transit District
ADT	Average Daily Traffic
BART	Bay Area Rapid Transit
CAMUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CMP	Congestion Management Program
E+P	Existing plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
N/A	Not Applicable
NP	No Project (Without Project)
PHF	Peak Hour Factor
Project	San Leandro Industrial
sf	Square Feet
TA	Traffic Analysis
TSF	Thousand Square Feet
UPPR	Union Pacific Railroad
WP	With Project
v/c	Volume to Capacity
VMT	Vehicle Miles Traveled

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1 INTRODUCTION

This report presents the results of the Traffic Analysis (TA) for San Leandro Industrial (**Project**), which is located 1700 Doolittle Drive in the City of San Leandro, as 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 traffic study has been prepared in accordance with the City of San Leandro's Traffic Study Guidelines (dated March 2018, City's Guidelines), and consultation with City staff during the traffic study scoping process. (1) The City approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

1.1 SUMMARY OF FINDINGS

All of the study area intersections are anticipated to operate at an acceptable level of service (LOS) for all analysis scenarios. The Project should construct site adjacent roadway and driveway improvements consistent with City Standards and as needed to facilitate site access. Additional details and intersection lane geometrics are provided in Section 1.6 *Site Adjacent Roadway and Site Access Recommendations* of this report.

1.2 PROJECT OVERVIEW

For the purposes of this TA, the Project is proposed to consist of the development of a warehouse building with up to 71,200 square feet of building space. A preliminary site plan for the proposed Project is shown on Exhibit 1-2. Access to the Project site will be accommodated via Doolittle Drive and Williams Street (both proposed to have full access). The Project is anticipated to have an opening year of 2024.

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) based on the General Light Industrial (ITE Land Use Code 110) land use. (2) The Project is anticipated to generate a total of 350 two-way trips per day with 52 AM peak hour trips and 45 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 traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2022) Conditions
- Existing plus Project (E+P) Conditions
- Opening Year Cumulative (2024) Without Project Conditions
- Opening Year Cumulative (2024) With Project Conditions

EXHIBIT 1-1: LOCATION MAP

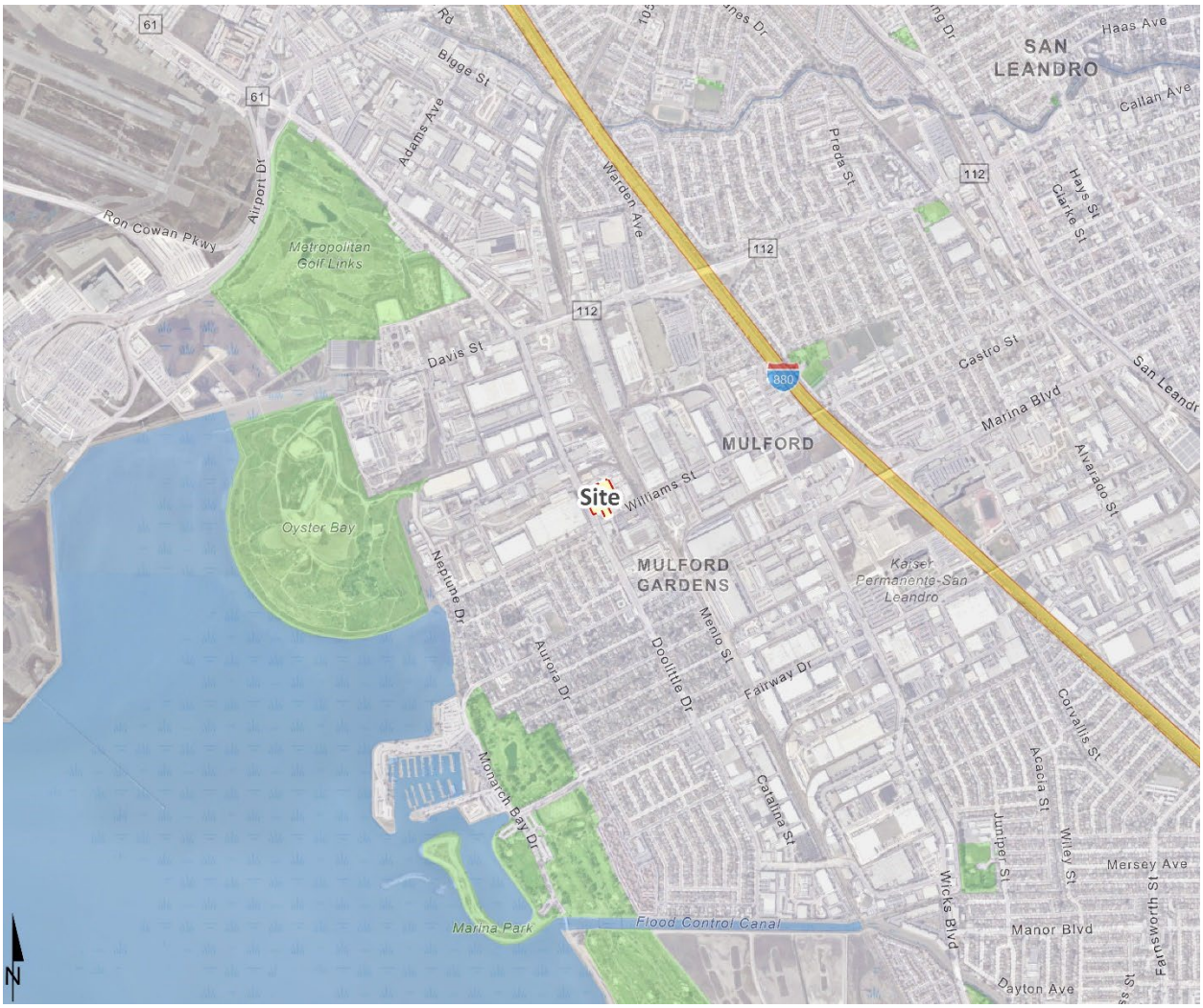


EXHIBIT 1-2: PRELIMINARY SITE PLAN

1.3.1 EXISTING (2022) CONDITIONS

Information for Existing (2022) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. For a detailed discussion on the existing traffic counts, see Section 3.6 *Existing Traffic Counts*.

1.3.2 E+P CONDITIONS

The E+P conditions analysis determines the potential circulation system deficiencies based on a comparison of the E+P traffic conditions to Existing conditions. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. The E+P analysis is intended to identify deficiencies associated with the development of the proposed Project. No additional background growth or cumulative development project traffic are included in the forecasts for E+P traffic conditions.

1.3.3 OPENING YEAR CUMULATIVE (2024) CONDITIONS

The Opening Year Cumulative (2024) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2022) conditions of 1.55% (0.772 percent per year over 2 year) is included for Opening Year Cumulative (2024) traffic conditions. This annual growth rate is based on the average Association of Bay Area Governments (ABAG) projected growth for employment, population, and households for San Leandro. Conservatively, this TA estimates the area ambient traffic growth and then adds traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed ambient growth rates; and some of these related projects may not be implemented and operational within the 2024 Opening Year time frame assumed for the Project. The resulting traffic growth utilized in the TA (ambient growth factor plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2024 traffic conditions.

1.4 STUDY AREA

To ensure that this TA satisfies the City of San Leandro's traffic study requirements, Urban Crossroads, Inc. prepared a Project traffic study scoping package for review by City of San Leandro staff prior to the preparation of this report. This agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The agreement approved by the City is included in Appendix 1.1 of this TA.

The 3 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for evaluation in this TA based on consultation with City of San Leandro staff. The study area that is proposed to be evaluated is shown on Exhibit 1-3.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection	Jurisdiction	CMP?
1	Doolittle Dr. & Driveway 1	City of San Leandro	No
2	Doolittle Dr. & Williams St.	City of San Leandro	No
3	Driveway 2 & Williams St.	City of San Leandro	No

Note: A CMP intersection has been identified for any two CMP roadways that intersect one another

The intent of a 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. (3) There are no CMP intersections within the 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 5 *E+P Traffic Conditions* and Section 6 *Opening Year Cumulative (2024) Traffic Conditions* include the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Table 1-2.

TABLE 1-2: SUMMARY OF LOS

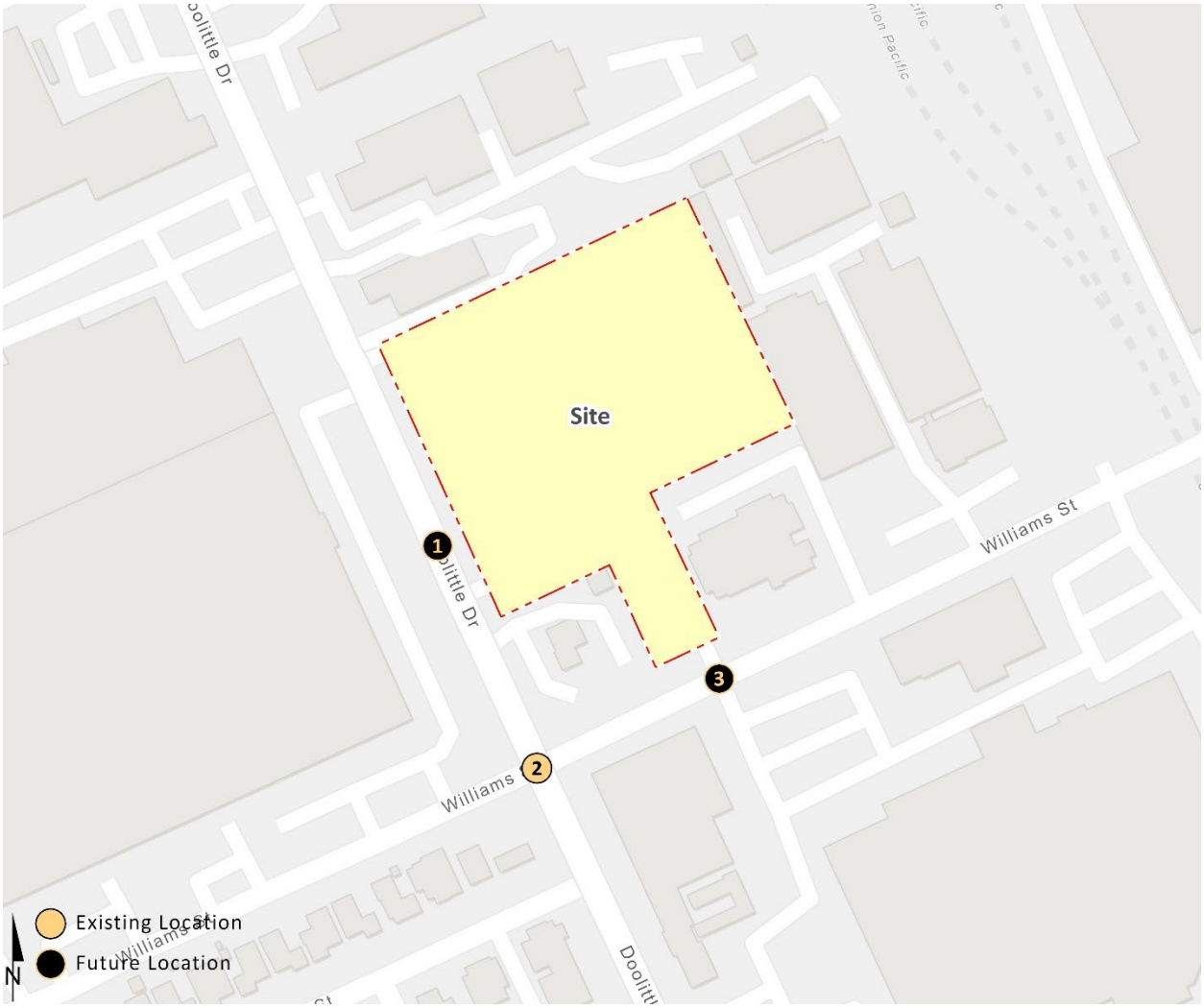
		Existing		E+P		2024 Without Project		2024 With Project	
#	Intersection	AM	PM	AM	PM	AM	PM	AM	PM
1	Doolittle Dr. & Driveway 1								
2	Doolittle Dr. & Williams St.								
3	Driveway 2 & Williams St.								

LOS=A-D LOS=E LOS=F

1.5.1 EXISTING (2022) CONDITIONS

All of the study area intersections are currently operating at an acceptable LOS during the weekday AM and PM peak hours.

EXHIBIT 1-3: STUDY AREA



1.5.2 E+P CONDITIONS

All of the study area intersections are anticipated to continue to operate at an acceptable LOS under E+P traffic conditions.

1.5.3 OPENING YEAR CUMULATIVE (2024) CONDITIONS

All of the study area intersections are anticipated to continue to operate at an acceptable LOS under both Opening Year Cumulative Without and With Project traffic conditions.

1.6 SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS

The recommended site access driveway improvements for the Project are described below. Exhibit 1-4 illustrates the site access improvements. Construction of on-site and site adjacent improvements shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Doolittle Drive & Driveway 1 (#1) – This is a new Project driveway/access proposed on Doolittle Drive. The southbound left turn lane on Doolittle Drive will be accommodated by the existing painted two-way left turn lane. The driveway should be signed with a stop control for the exiting Project traffic.

Driveway 2 & Williams St. (#3) – This is a new Project driveway/access that is proposed to align with an existing driveway on the south side of Williams Street. The driveway should be signed with a stop control for the exiting Project traffic.

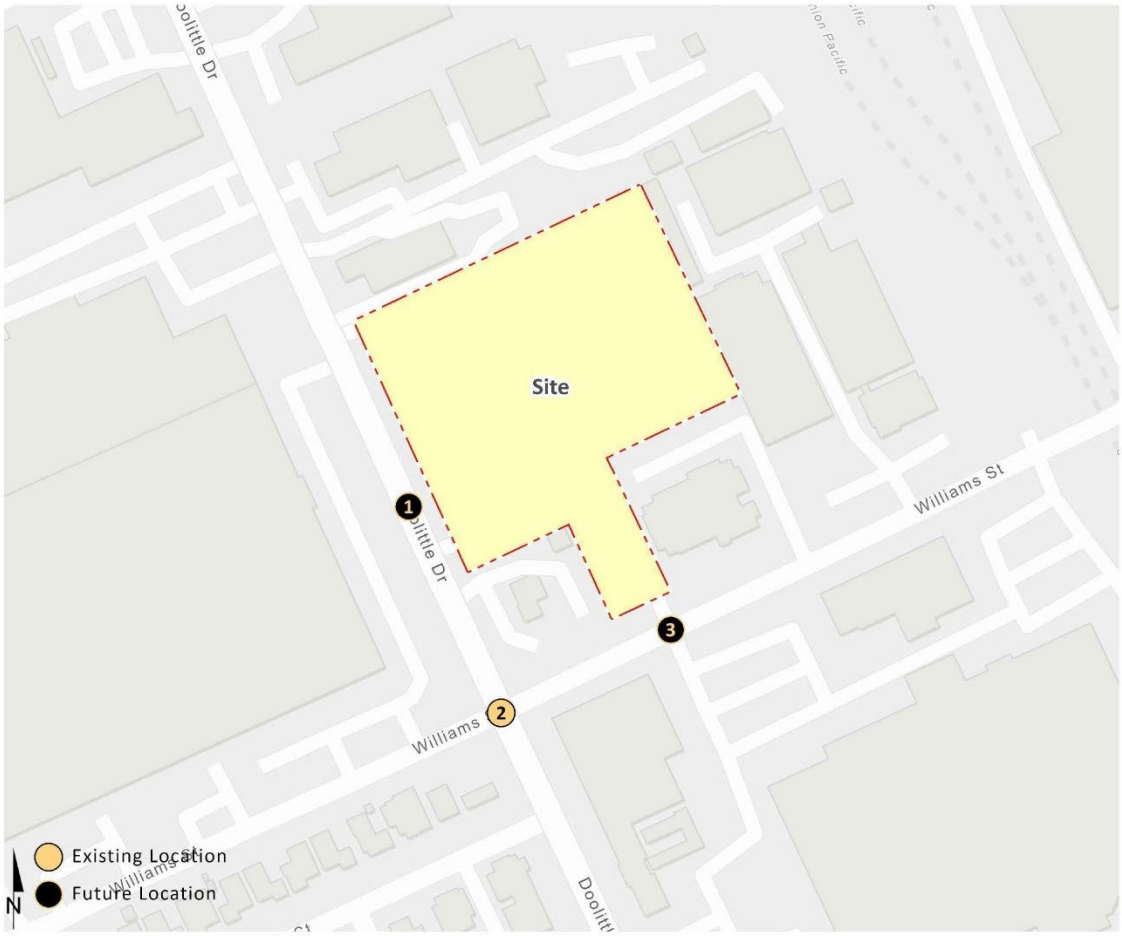
Doolittle Drive – The existing right-of-way of Doolittle Drive is 80-feet. There are future plans to widen Doolittle Drive to accommodate future traffic growth. As such, the Project will provide an additional 12-foot right-of-way dedication along its western frontage (for an ultimate right-of-way of 104-feet).

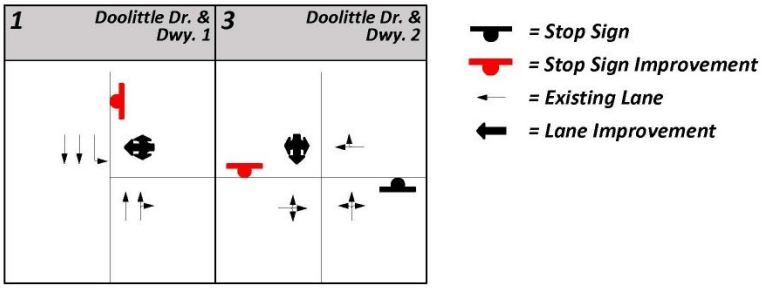
Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the City of San Leandro General Plan Circulation Element. On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site. Sight distance at each project access point should be reviewed with respect to standard City of San Leandro sight distance standards at the time of preparation of final grading, landscape, and street improvement plans.

1.7 TRUCK ACCESS

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable 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). A WB-67 truck (53-foot trailer) has been utilized for the purposes of this analysis. As shown on Exhibit 1-5, the southeast corner of Driveway 1 on Doolittle Drive should be modified to accommodate a 50-foot curb radius and should be widened by 5-feet in order to accommodate the ingress and egress of heavy trucks.

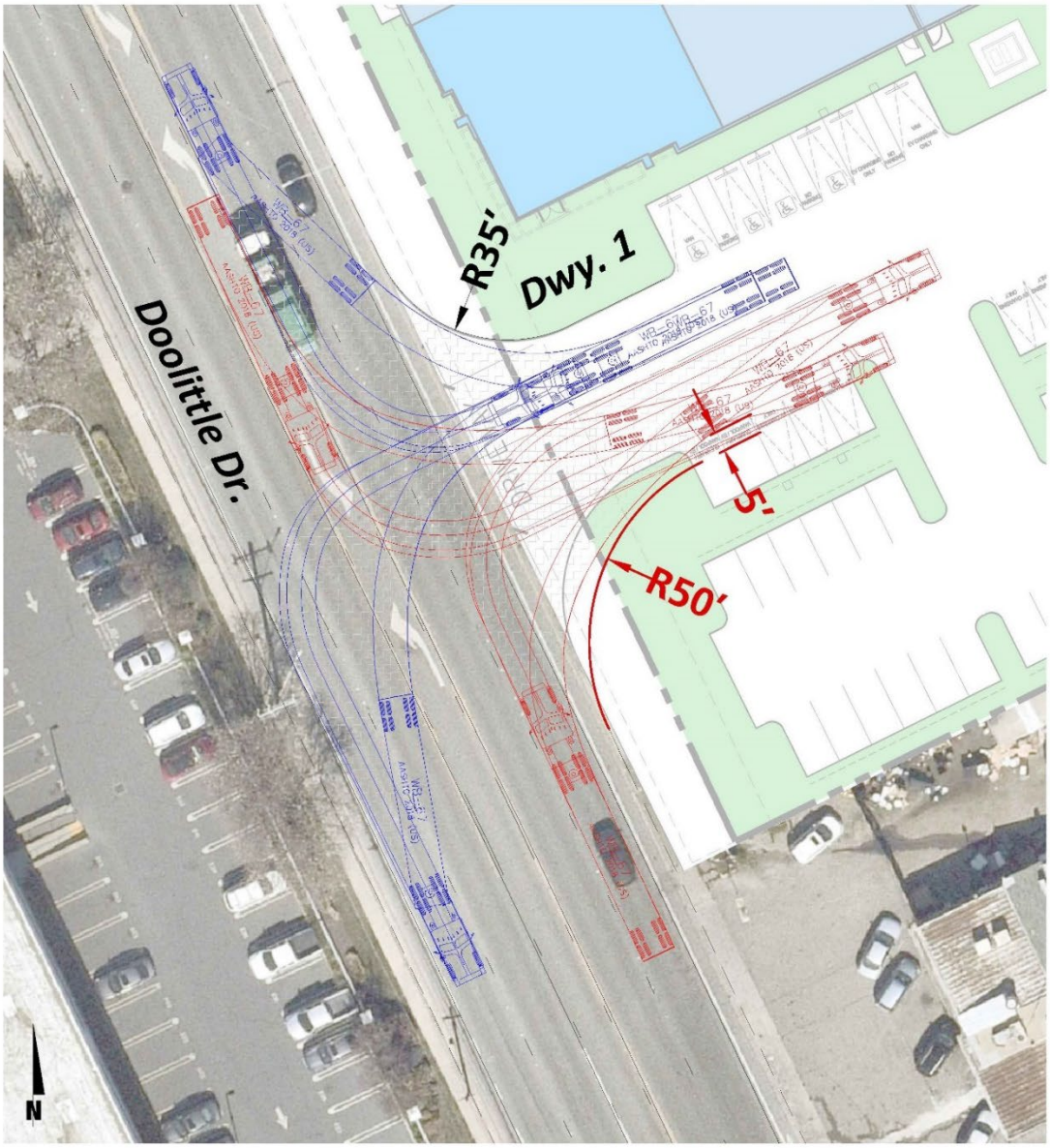
EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS

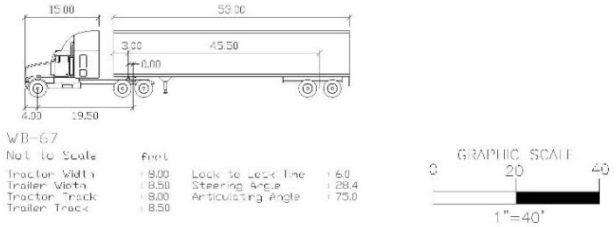




= Stop Sign
= Stop Sign Improvement
= Existing Lane
= Lane Improvement

EXHIBIT 1-5: TRUCK ACCESS





1.8 QUEUING ANALYSIS

A queuing analysis was conducted for the Project driveways and the site adjacent intersection of Doolittle Drive at Williams Street for Opening Year Cumulative (2024) With Project traffic conditions to determine the turn pocket lengths and lane geometric necessary to accommodate near-term 95th percentile queues and recommend storage lengths for the turning movements shown on Exhibit 1-4. The analysis was conducted for the weekday AM and weekday PM peak hours using the SimTraffic modeling software. The Opening Year Cumulative (2024) With Project queuing results are summarized in Table 1-3 and worksheets are included in Appendix 1.2 of this TA.

SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro (Version 11) to generate random simulations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or Average Queue plus 1.65 standard deviations). The random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each turn lane. A SimTraffic simulation has been recorded 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 15-minute periods with 60-minute recording intervals.

TABLE 1-3: QUEUING ANALYSIS SITE ADJACENT INTERSECTIONS

#	Intersection	Movement	Available Stacking Distance (Feet)	2024 With Project 95th % Queue (ft)		Acceptable? [1]	
				AM	PM	AM	PM
1	Doolittle Dr. & Driveway 1	NBT/R	225	8	0	Yes	Yes
		SBL	50	23	0	Yes	Yes
		SBT	250	0	128	Yes	Yes
		WBL/R	100	17	38	Yes	Yes
3	Driveway 2 & Williams St.	NBL/T/R	100	48	60	Yes	Yes
		SBL/T/R	100	23	38	Yes	Yes
		EBL/T/R	165	36	8	Yes	Yes
		WBL/T/R	625	28	14	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet (1 car length) of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

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 San Leandro'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 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 San Leandro requires signalized intersection operations analysis based on the methodology described in the HCM. Intersection LOS operations are based on an intersection's average control delay. Control delay includes 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 on Table 2-1.

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.

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.

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of San Leandro requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM (ICU methodology is applicable to signalized intersections only). (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 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 on roadways with speeds greater than 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 on Table 2-3.

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection	Jurisdiction
1	Doolittle Dr. & Driveway 1	City of San Leandro
3	Driveway 2 & Williams St.	City of San Leandro

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 *E+P Traffic Conditions* and Section 6 *Opening Year Cumulative (2024) 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)

The definition of an intersection deficiency has been obtained from the City of San Leandro's 2035 General Plan. LOS D or better is to be maintained at all City-controlled intersections. (6)

2.5 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria has been utilized for the study area intersections. To determine whether the addition of project-related traffic at a study intersection would result in a deficiency, the following will be utilized:

- A project-related deficiency is considered significant when a study intersection operates at an acceptable LOS for existing conditions (or pre-project conditions) and the addition of project trips causes the intersection to operate at an unacceptable LOS for existing plus project (E+P) traffic conditions.
- A project-related deficiency is considered significant when a study intersection operates at an unacceptable LOS for existing conditions (or pre-project conditions) and the addition of project trips causes the intersection v/c to increase by 0.05 or more.

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of San Leandro 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 San Leandro staff (Appendix 1.1), the study area includes a total of 3 existing and future 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 SAN LEANDRO GENERAL PLAN CIRCULATION ELEMENT

As noted previously, the Project site is located within the City of San Leandro. Exhibit 3-2 shows the City of San Leandro and City of Oakland General Plan Street Classifications.

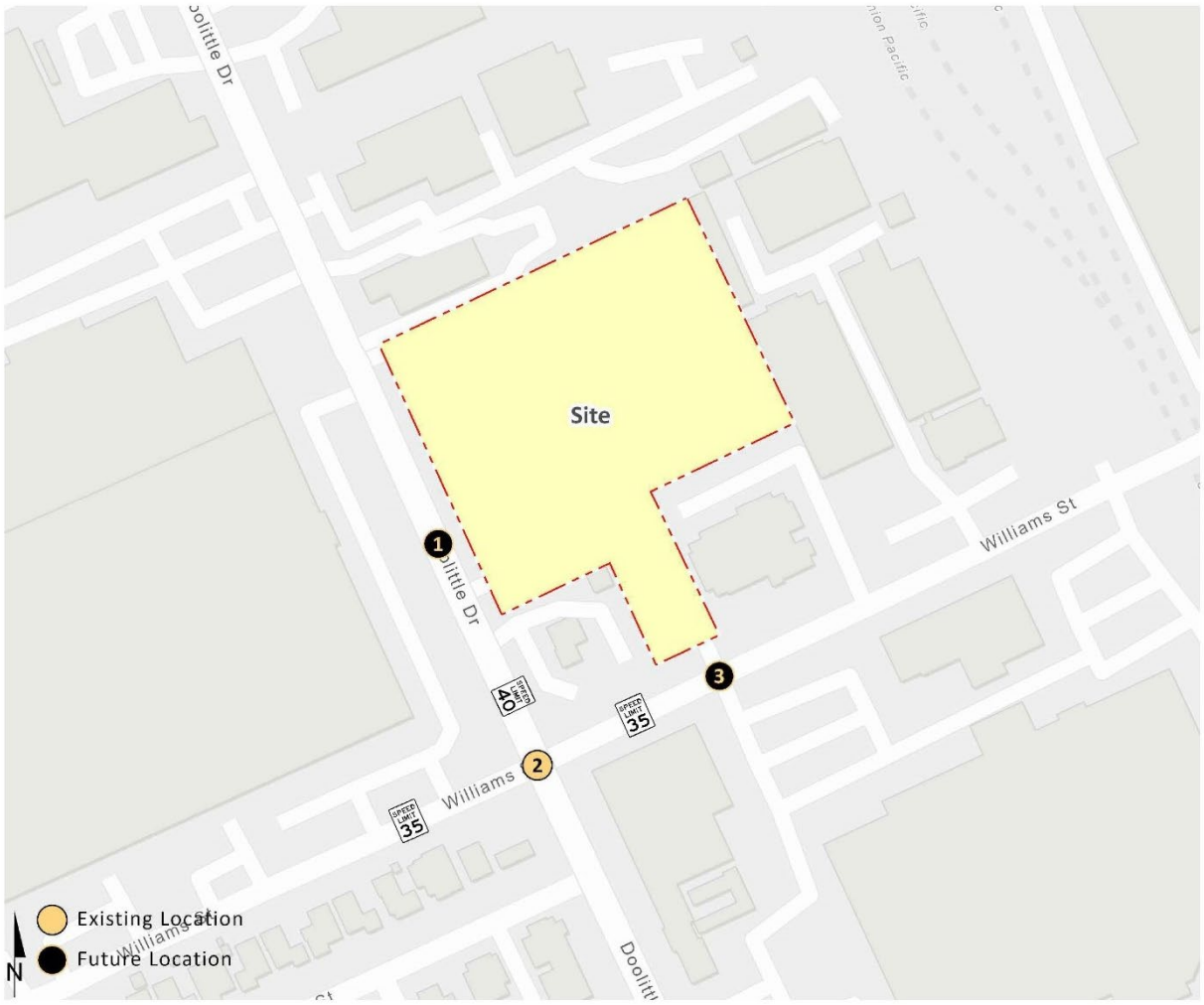
Arterials can accommodate two to six travel lanes. These facilities serve regional through traffic and connect the major destinations within the City to the freeway system. Access from abutting property is generally restricted. The following roadway is classified as an Arterial within the study area:

- Doolittle Dr.

Collectors can accommodate two travel lanes with on-street parking and signalized intersections at major intersections. These facilities carry low volumes (less than 10,000 vehicles per day) and connect residential areas to arterials. The following roadway is classified as a Collector within the study area:

- Williams St.

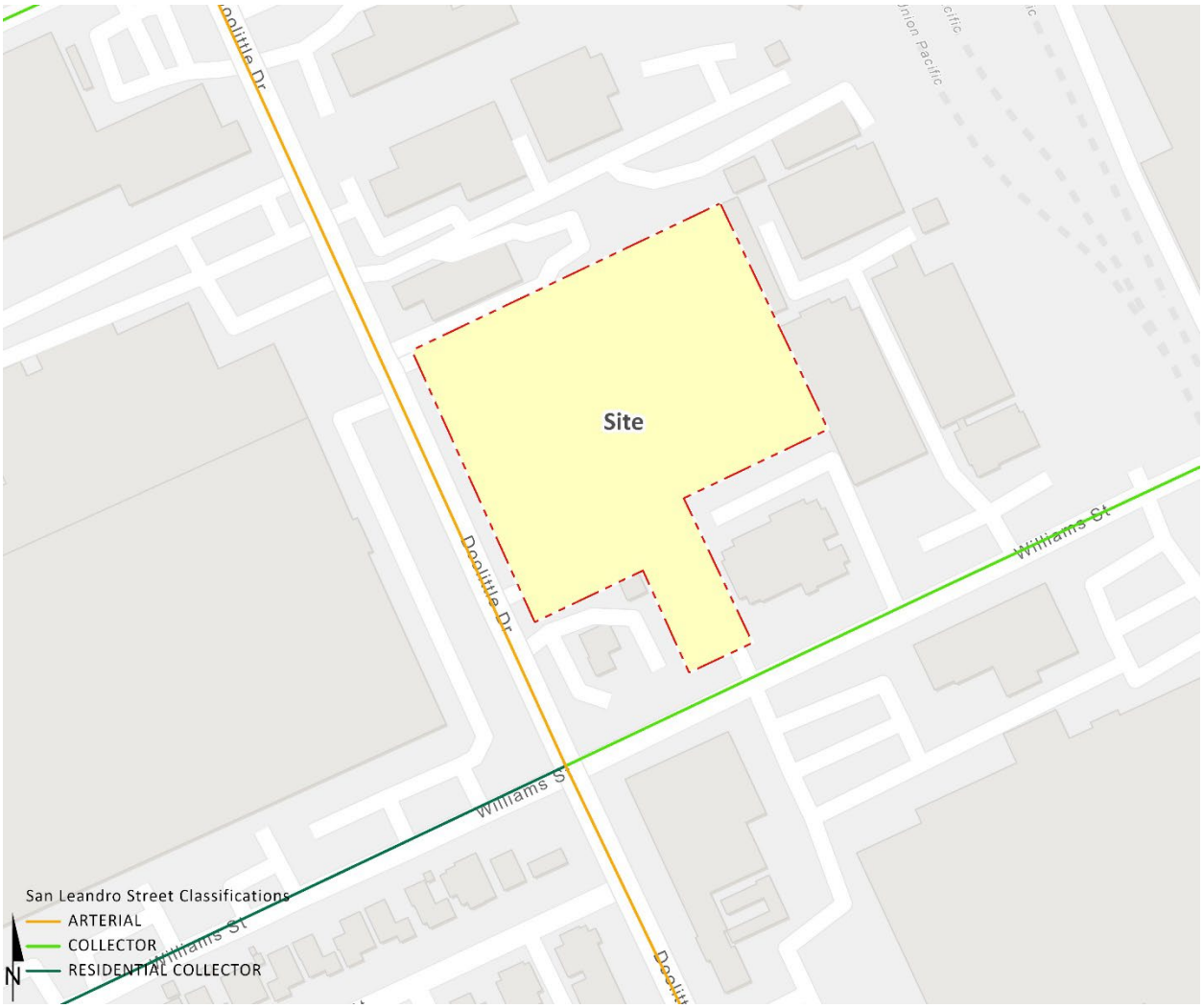
EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



1 Doolittle Dr. & Dwy. 1	2 Doolittle Dr. & Williams St.	3 Doolittle Dr. & Dwy. 2
Future Intersection	4D, 2U, 2U, 4U	2U, 2U

= Traffic Signal
= Stop Sign
4 = Number of Lanes
D = Divided
U = Undivided
= Speed Limit (MPH)

EXHIBIT 3-2: CITY OF SAN LEANDRO GENERAL PLAN STREET CLASSIFICATION



3.3 TRUCK ROUTES

The City of San Leandro designated truck route map is shown on Exhibit 3-3. Doolittle Drive and Williams Street are both identified as designated truck routes within the City. These designated truck route maps have been utilized to route truck traffic from the Project (and cumulative development project) traffic throughout the study area.

3.4 TRANSIT SERVICE

Mass transit routes within the study area are shown on Exhibit 3-4. The study area is currently served by Alameda-Contra Costa Transit District (AC Transit), the 3rd largest public bus system in California which serves 13 cities and unincorporated areas of Alameda and Contra Costa counties (364-square mile service area). AC Transit currently has 175,000 riders daily served by their 158 bus lines with approximately 5,400 bus stop locations. AC Transit Route 35 runs along Williams Street adjacent to the Project within the City of San Leandro. There is an existing stop located on Williams Street on either side of Doolittle Drive.

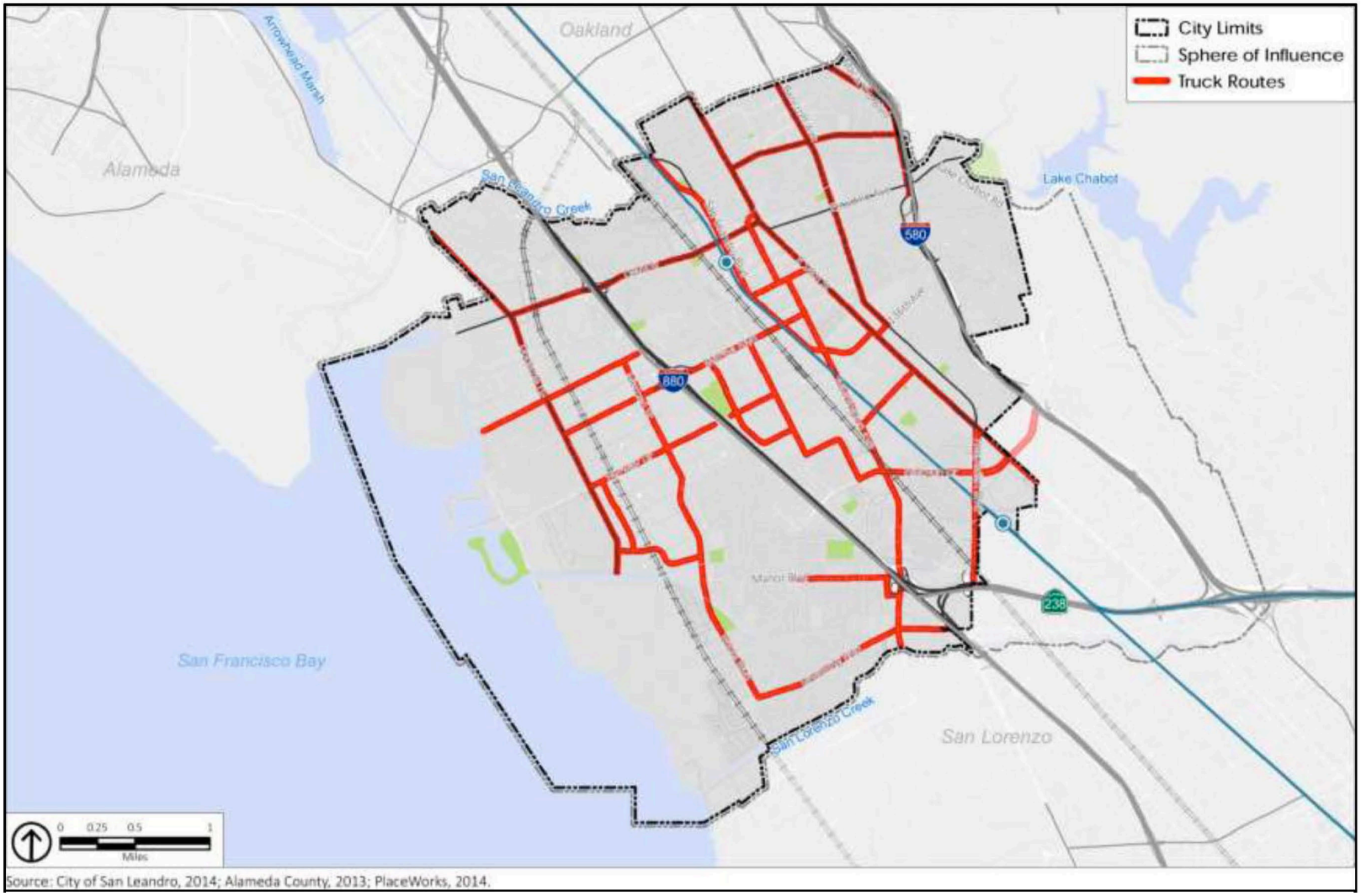
The study area is also served by the San Francisco Bay Area Rapid Transit (BART). BART is a public rail transit system that connects the San Francisco Peninsula with communities located in East and South Bays. BART operates 131 miles of track with 50 stations and carry approximately 405,000 trips on an average weekday. The San Leandro BART station is located approximately 1-mile to the east of the I-880 Freeway south of Davis Street on San Leandro Boulevard. The station has connecting transit routes served by AC Transit, LINKS, and the FLEX shuttle. The lines served by the San Leandro BART station include:

- Dublin/Pleasanton to/from Daly City
- Richmond to/from Berryessa/North San Jose Station
- Daly City to/from Berryessa/North San Jose station
- MacArthur to/from Dublin/Pleasanton

The San Leandro LINKS shuttle is a free shuttle to and from BART. There is a North Loop and South Loop. The North Loop runs along Davis Street from the BART station to Marina Boulevard, Merced Street, Williams Street, Doolittle Drive, and Davis Street.

The FLEX Shuttle is a fixed route service similar to LINKS. There is a North Route and South Route through the City of San Leandro. The FLEX Shuttle serves seniors ages 50+ and persons with disabilities (aged 18+) who reside within the City. The North Route runs along portions of Williams Street, Doolittle Drive, Timothy Drive/W. Gate Parkway, and Davis Street (east of Timothy Drive).

EXHIBIT 3-3: CITY OF SAN LEANDRO TRUCK ROTUES



Source: City of San Leandro, 2014; Alameda County, 2013; PlaceWorks, 2014.

EXHIBIT 3-4: EXISTING TRANSIT ROUTES – AC TRANSIT

3.5 BICYCLE & PEDESTRIAN FACILITIES

In an effort to promote alternative modes of transportation, the City of San Leandro also includes the existing and proposed bicycle network (see Exhibit 3-5). As shown on Exhibit 3-5, the study area includes existing Class II bike lanes along Doolittle Drive and Williams Street. Class II bike lanes are on-street, striped bike lanes. Doolittle Drive and Williams Street are proposed as Class IV bikeways (on-street bike lanes, separated from vehicular traffic via a physical separation). Exhibit 3-6 illustrates the existing pedestrian facilities, which includes sidewalks and crosswalk locations. Sidewalks exist throughout most of the study area with crosswalks provided at all signalized study area intersections.

3.6 EXISTING (2022) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in April 2022. Peak hour intersection traffic counts (classified by vehicle type) were conducted during a typical weekday when local schools are in session and operating on a typical bell schedule. The morning and evening peak periods will coincide with the typical commute time periods and are evaluated as standard practice. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 11:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 7:00 PM)

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. Existing weekday ADT volumes 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 10.55 = 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 9.48 percent. As such, the above equation utilizing a factor of 10.55 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of 9.48 percent (i.e., 1/0.0948 = 10.55) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday and weekend peak hour intersection volumes are also shown on Exhibit 3-7.

EXHIBIT 3-5: CITY OF SAN LEANDRO BICYCLE & PEDESTRIAN PLAN

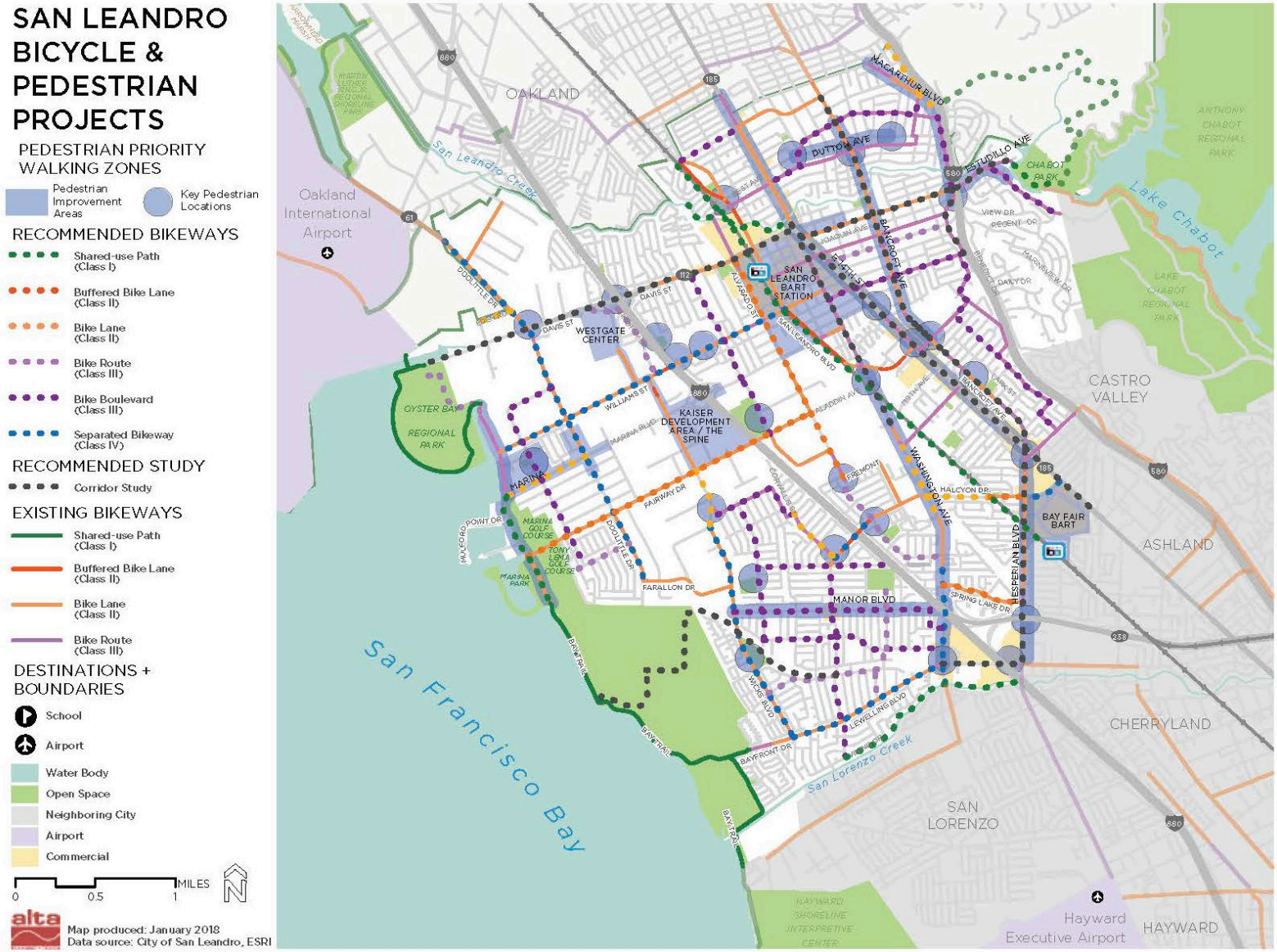


EXHIBIT 3-6: EXISTING PEDESTRIAN FACILITIES

EXHIBIT 3-7: EXISTING (2022) TRAFFIC VOLUMES

1 Doolittle Dr. & Driveway 1

16,900

494(932) ↓

1168(671) ↑

16,900

2 Doolittle Dr. & Williams St.

16,850

48(52) ↲ 381(709) ↓ 65(171) ↳

83(72) ↳ 113(92) → 29(28) ↲

3,800

6,950

165(121) ↱ 67(83) ← 82(90) ↰

68(31) ↰ 920(478) ↑ 107(101) ↱

15,150

3 Driveway 2 & Williams St.

7,150

312(292) ← 15(5) ↰

277(365) → 6(5) ↲

4(60) ↰ 10(17) ↱

7,600 ***900***

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

Average Daily Trips

3.7 INTERSECTION OPERATIONS ANALYSIS

Existing 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 on Table 3-1, which indicates that all existing study area intersections are currently operating at acceptable LOS during the morning and evening peak hours. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2022) CONDITIONS

#	Intersection	Traffic Control[1]	Delay[2] (secs.) AM	Delay[2] (secs.) PM	Level of Service AM	Level of Service PM
1	Doolittle Dr. & Driveway 1		Future Intersection			
2	Doolittle Dr. & Williams St.	TS	20.3	25.7	C	C
3	Driveway 2 & Williams St.	CSS	11.5	15.6	B	C

[1] CSS = Cross-street Stop; TS = Traffic Signal

[2] Per the Highway Capacity Manual (HCM 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

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. There are no existing study area intersections that currently 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 proposed to consist of the development of a warehouse building with up to 71,200 square feet of building space. Access to the Project site will be accommodated via Doolittle Drive and Williams Street (both proposed to have full access). The Project is anticipated to have an opening year of 2024.

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. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) was used to estimate the trip generation. (2) The following trip generation rate and vehicle mix were utilized for calculating the trip generation for the proposed Project:

- ITE land use code 110 (General Light Industrial) has been used to derive site specific trip generation estimates for up to 71,200 square feet of the proposed Project. A light industrial facility is a free-standing facility devoted to a single use that has an emphasis on activities other than manufacturing. Typically, there is minimum office space. The vehicle mix has been obtained from the ITE's Trip Generation Manual. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

Trip generation rates are summarized on Table 4-1.

TABLE 4-1: PROJECT TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	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 Vehicle Trip Generation Rates									
General Light Industrial[3]	TSF	110	0.651	0.089	0.740	0.091	0.559	0.650	4.870
Passenger Cars			0.645	0.085	0.730	0.086	0.554	0.640	4.620
2-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.042
3-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.052
4+-Axle Trucks			0.004	0.002	0.006	0.003	0.003	0.006	0.157

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] TSF = thousand square feet

[3] Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

The trip generation summary illustrating daily and peak hour trip generation estimates for the proposed Project are shown on Table 4-2. The proposed Project is anticipated to generate 350 two-way trip-ends per day with 52 AM peak hour trips and 45 PM peak hour trips (see Table 4-2).

TABLE 4-2: PROJECT TRIP GENERATION SUMMARY

			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[1]	In	Out	Total	In	Out	Total	Daily
Actual Vehicles:									
General Light Industrial	71.200	TSF							
Passenger Cars:			46	6	52	6	39	45	330
2-axle Trucks:			0	0	0	0	0	0	4
3-axle Trucks:			0	0	0	0	0	0	4
4+-axle Trucks:			0	0	0	0	0	0	12
Total Truck Trips (Actual Vehicles):			0	0	0	0	0	0	20
Total Trips (Actual Vehicles)[2]			46	6	52	6	39	45	350

[1] TSF = thousand square feet

[2] Total Trips = Passenger Cars + Truck Trips.

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. Project passenger car and truck distribution patterns are based on existing travel patterns determined from existing traffic counts at the study area intersections. Exhibits 4-1 and 4-2 show the Project truck and passenger car trip distribution patterns, respectively.

4.3 MODAL SPLIT

The potential for Project trips (non-truck) 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.

EXHIBIT 4-1: PROJECT (TRUCK) TRIP DISTRIBUTION

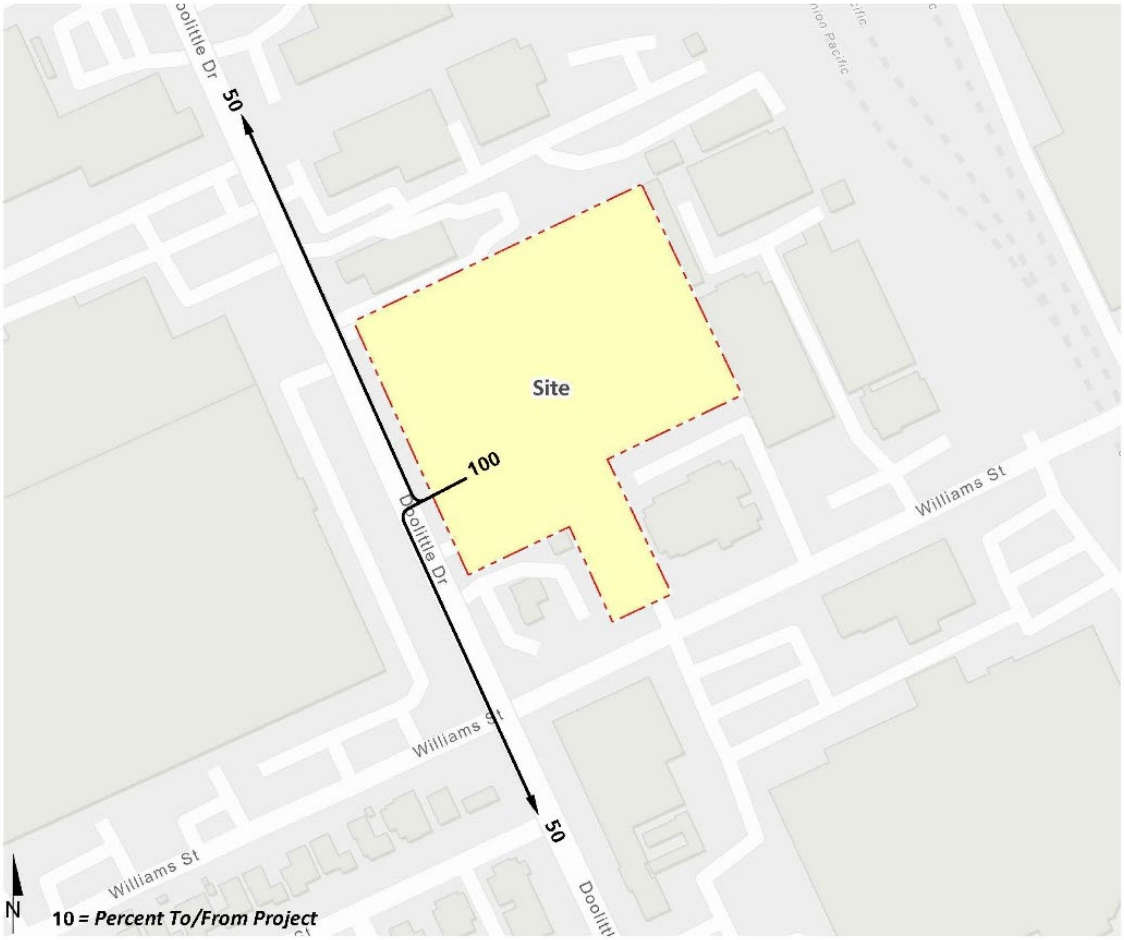
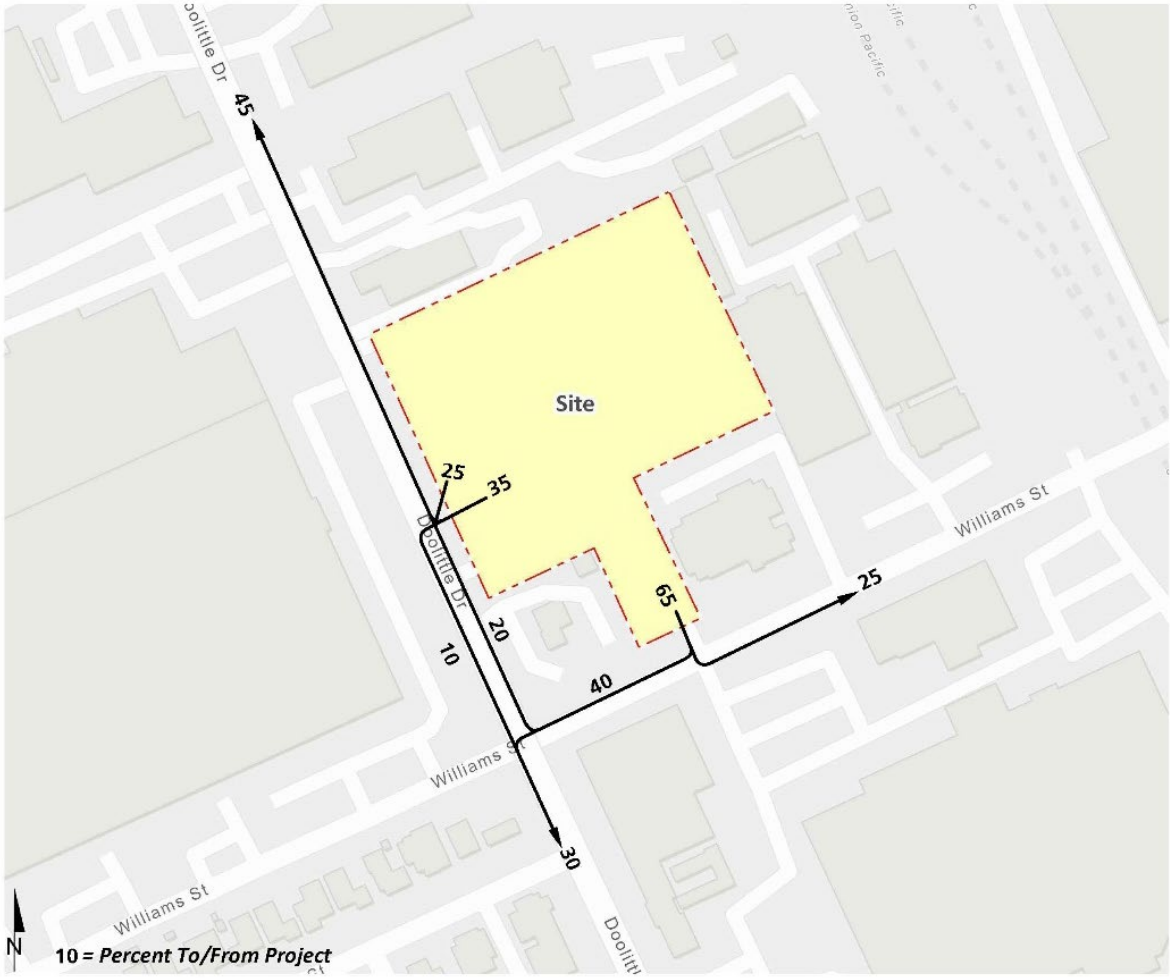


EXHIBIT 4-2: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



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, 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 weekday ADT and weekday AM and PM peak hour intersection turning movement volumes are shown on Exhibit 4-3.

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 0.772% per year for 2024 traffic conditions. This annual growth rate is based on the average ABAG projected growth for employment, population, and households for San Leandro. The total ambient growth is 1.55% for 2024 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 conjunction with 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. Opening Year Cumulative (2024) traffic volumes are provided in Section 6 of this report. The traffic generated by the proposed Project was then manually added to the base volume to determine Opening Year Cumulative "With Project" forecasts for each applicable phase.

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 San Leandro. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections. Cumulative projects anticipated to contribute traffic to study area intersections have been manually added to the study area network to generate Opening Year Cumulative (2024) forecasts. In other words, this list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). Exhibit 4-4 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown on Table 4-3. 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 are shown on Exhibit 4-5 for near-term traffic conditions.

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES

1 Doolittle Dr. & Driveway 1	2 Doolittle Dr. & Williams St.	3 Driveway 2 & Williams St.
150 ← 9(1) 12(2) → ***100***	***100*** ← 1(4) 9(1) → ***100***	***200*** ← 2(15) 2(1) → ***150***
150 ← 2(10) 1(4) → ↑ 1(8) ↱ 5(1) ***100***	***150*** ← 1(8) 1(8) → ↑ 5(1) ↱ 9(1) ***100***	***100*** ← 12(2) 18(2) → ↳

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

Average Daily Trips

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP

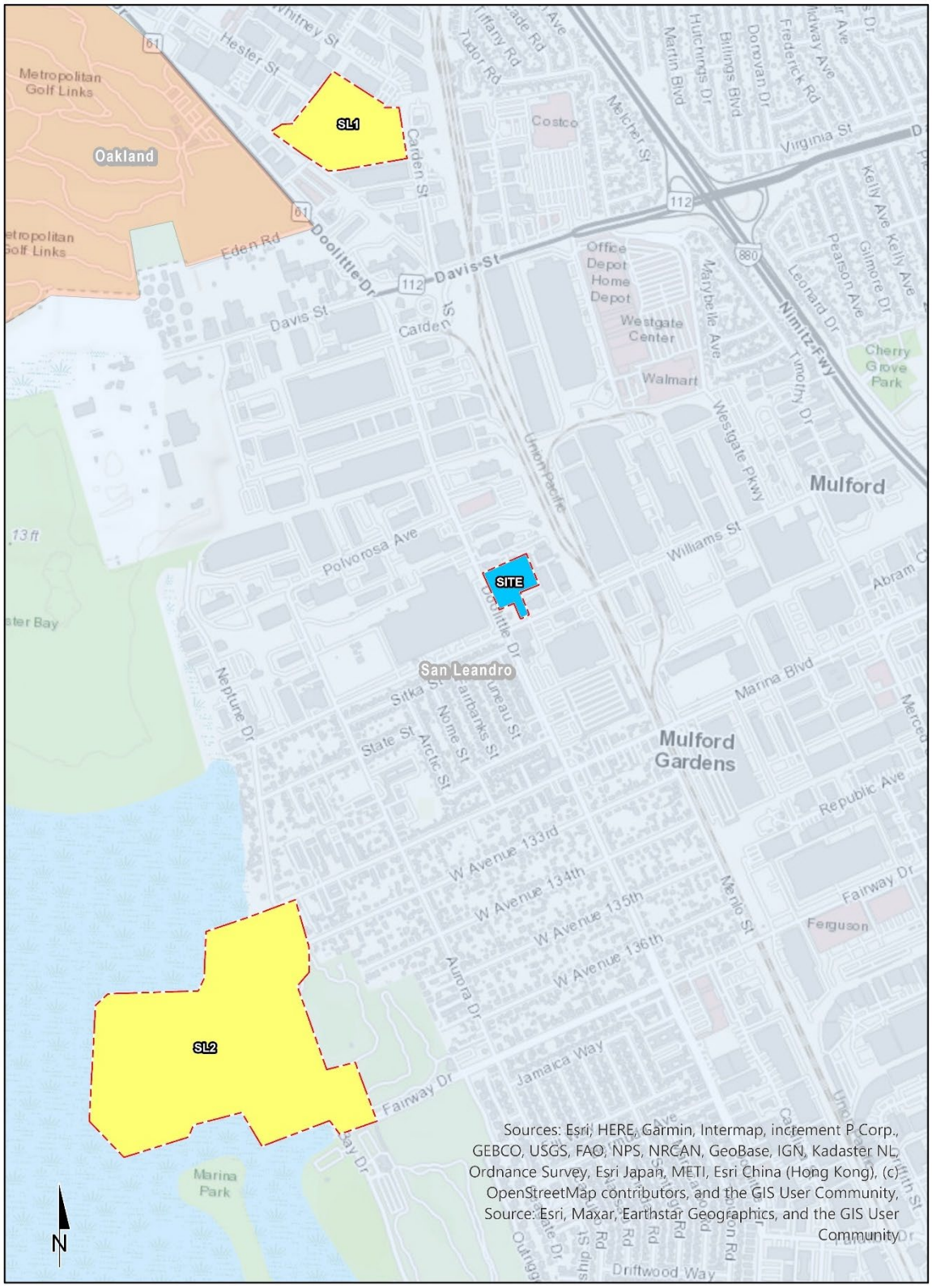
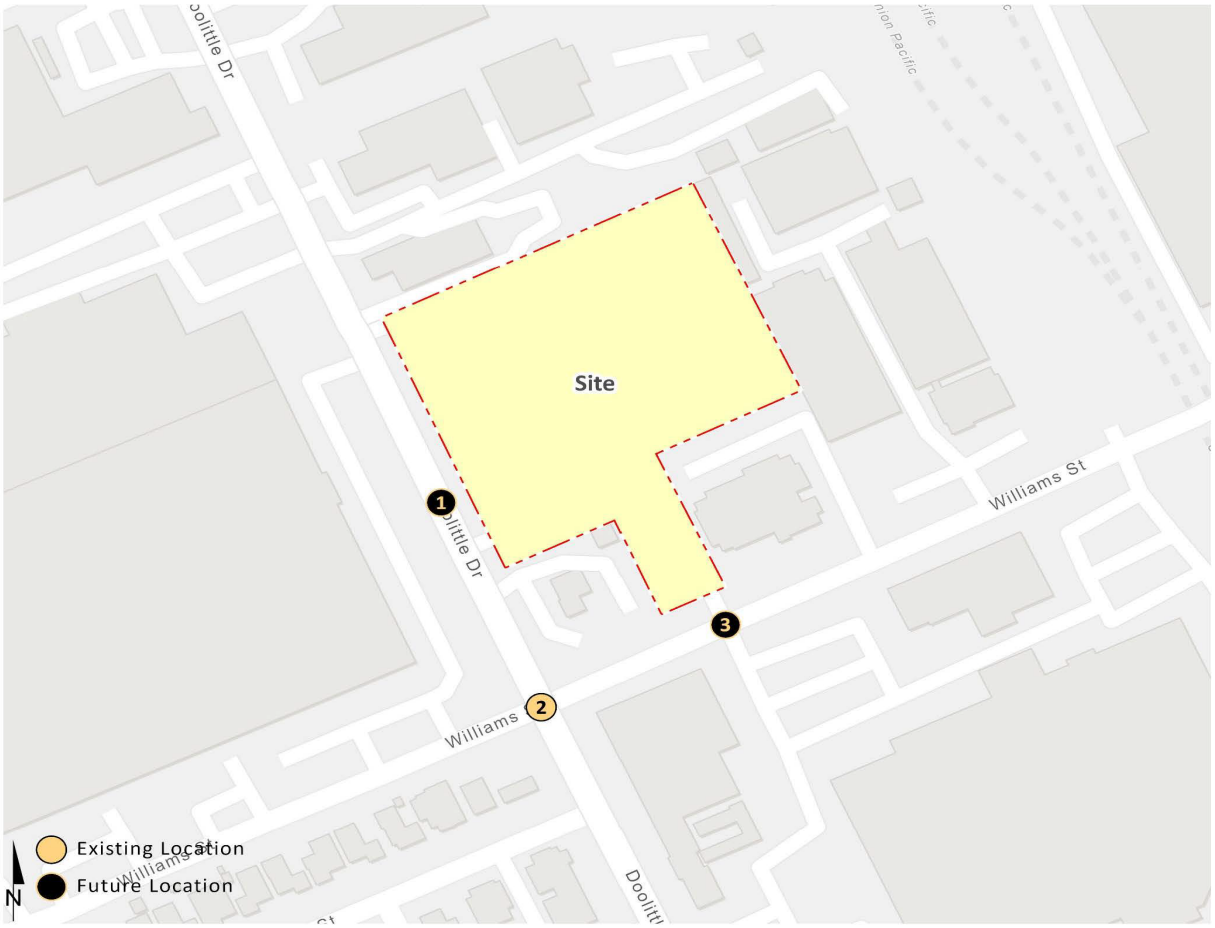


EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES



1 Doolittle Dr. & Driveway 1	2 Doolittle Dr. & Williams St.	3 Driveway 2 & Williams St.
2,500 ↓ 87(89)	2,500 ↓ 82(88) ↳ 5(1)	1,300 ← 35(49)
→ 89(80) 2,500	↰ 3(2) ↰ 32(47) ↑ 86(78) ↱ 45(33) 2,500	51(34) → 1,300

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

Average Daily Trips

TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

ID	Project Name	Land Use[1]	Quantity	Units[2]
SL1	Prologis - 880 Doolittle	Distribution Warehouse	106.190	TSF
SL2	Shoreline Development	Restaurant - Quality	20.000	TSF
		Hotel	220	Rooms
		Apartments	285	DU
		Townhomes	48	DU
		Single Family Detached	152	DU
		Food Market	3.000	TSF
		Golf Course	23.05	AC
		Park/Open Space	9.0	AC

[1] DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres

4.7 NEAR-TERM TRAFFIC CONDITIONS

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the near-term Opening Year Cumulative (2024) traffic conditions. An ambient growth factor of 0.772% per year, compounded annually, accounts for background (area-wide) traffic increases that occur over time up to the year 2024 from the year 2022. Traffic volumes generated by cumulative development projects are then added to assess the Opening Year Cumulative (2024) traffic conditions. Lastly, Project traffic is added to assess "With Project" traffic conditions. The 2024 roadway network are similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2024) Without Project
  - Existing 2022 volumes
  - Ambient growth traffic (1.55%)
  - Cumulative Traffic
- Opening Year Cumulative (2024) With Project
  - Existing 2022 volumes
  - Ambient growth traffic (1.55%)
  - Cumulative Traffic
  - Project Traffic

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S5 E+P TRAFFIC CONDITIONS

This section discusses the methods used to develop E+P traffic forecasts, 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 E+P 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 E+P conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for EAP (2024) traffic conditions are shown on Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under E+P traffic conditions with roadway and intersection geometrics consistent with Section 5.1 *Roadway Improvements*. As shown on Table 5-1, the study area intersections are anticipated to operate at an acceptable LOS under E+P traffic conditions, consistent with Existing traffic conditions. The addition of Project traffic is anticipated to have nominal effects to the existing operations analysis. The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1 of this TA.

TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS

			Existing (2022)				E+P			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
#	Intersection	Traffic Control[2]	AM	PM	AM	PM	AM	PM	AM	PM
1	Doolittle Dr. & Driveway 1	CSS	Future Intersection				17.1	12.7	C	B
2	Doolittle Dr. & Williams St.	TS	20.3	25.7	C	C	21.0	26.9	C	C
3	Driveway 2 & Williams St.	CSS	11.5	15.6	B	C	13.8	18.0	B	C

1 Per the Highway Capacity Manual (HCM 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.

2 CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

EXHIBIT 5-1: E+P TRAFFIC VOLUMES

1 Doolittle Dr. & Driveway 1	2 Doolittle Dr. & Williams St.	3 Driveway 2 & Williams St.
17,050 ↓ 503(933) ↳ 12(2) ↰ 1(4) ↑ 1169(679) ↱ 5(1) ***150*** ↱ 2(10) ***17,000***	***16,950*** ↲ 48(52) ↓ 382(713) ↳ 74(172) 83(72) ↳ 113(92) → 29(28) ↲ ***3,800*** ↰ 68(31) ↑ 925(479) ↱ 116(102) ***7,100*** ↱ 166(129) ← 67(83) ↰ 83(98) ***15,250***	***200*** ↲ 2(15) ↳ 2(1) 18(2) ↳ 277(365) → 6(5) ↲ ***7,750*** ↰ 4(60) ↱ 10(17) ***7,250*** ↱ 12(2) ← 312(292) ↰ 15(5) ***900***

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

Average Daily Trips

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for E+P traffic conditions are based on the peak hour or planning level (ADT) volume-based traffic signal warrants. No study area intersections are anticipated to meet peak hour volume-based warrants for E+P traffic conditions (see Appendix 5.2).

5.5 DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

The study area intersections are anticipated to operate at an acceptable LOS for E+P traffic conditions. As such, no additional improvements aside from those that are needed to facilitate site access have been recommended.

6 OPENING YEAR CUMULATIVE (2024) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2024) traffic forecasts, 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 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 for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- If applicable, driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only.

6.2 WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 1.55% plus traffic from pending and approved but not yet constructed known development projects in the area. The weekday ADT and weekday peak hour volumes which can be expected for Opening Year Cumulative (2024) Without Project traffic conditions are shown on Exhibit 6-1.

6.3 WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Opening Year Cumulative (2024) Without Project traffic in conjunction with the addition of Project traffic. The weekday ADT and weekday peak hour volumes which can be expected for Opening Year Cumulative (2024) With Project traffic conditions are shown on Exhibit 6-2.

6.4 INTERSECTION OPERATIONS ANALYSIS

6.4.1 OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT TRAFFIC CONDITIONS

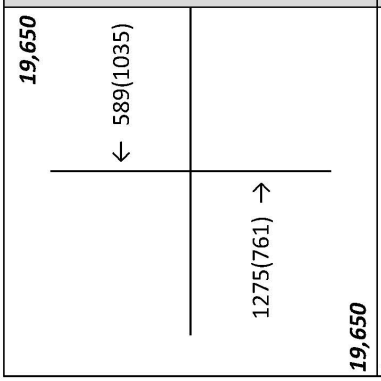
LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2024) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown on Table 6-1, the study area intersections operate at an acceptable LOS under Opening Year Cumulative (2024) Without Project traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2024) Without Project traffic conditions are included in Appendix 6.1 of this TA.

6.4.2 OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC CONDITIONS

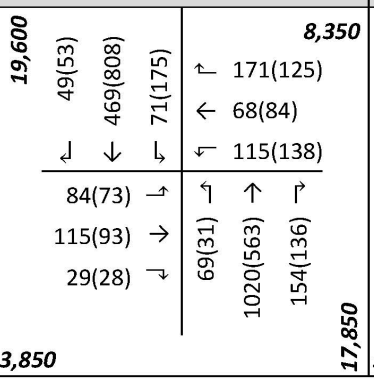
As shown on Table 6-1, the study area intersections are anticipated to continue to operate at an acceptable LOS with the addition of Project traffic for Opening Year Cumulative (2024) With Project traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2024) With Project traffic conditions are included in Appendix 6.2 of this TA.

EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT TRAFFIC VOLUMES

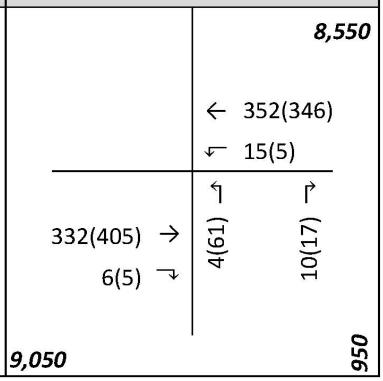
1 Doolittle Dr. & Driveway 1



2 Doolittle Dr. & Williams St.



3 Driveway 2 & Williams St.



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

Average Daily Trips

EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC VOLUMES

1 Doolittle Dr. & Driveway 1

19,800 | 598(1036) ↓ | 12(2) ↳ | *150* | 2(10) ↱ | 1(4) ↰ | 1276(769) ↑ | 5(1) ↱ | *19,750*

2 Doolittle Dr. & Williams St.

19,700 | 49(53) ↲ | 470(812) ↓ | 80(176) ↳ | *8,500* | 172(133) ↱ | 68(84) ← | 116(146) ↰ | 84(73) ↳ | 115(93) → | 29(28) ↲ | 69(31) ↰ | 1025(564) ↑ | 163(137) ↱ | *18,000* | *3,850*

3 Driveway 2 & Williams St.

200 | 2(15) ↲ | 2(1) ↳ | *8,650* | 12(2) ↱ | 352(346) ← | 15(5) ↰ | 18(2) ↳ | 332(405) → | 6(5) ↲ | 4(61) ↰ | 10(17) ↱ | *950* | *9,150*

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

Average Daily Trips

TABLE 6-1: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2024) CONDITIONS

#	Intersection	Traffic Control[2]	2024 Without Project Delay[1] (secs.) AM	PM	Level of Service AM	PM	2024 With Project Delay[1] (secs.) AM	PM	Level of Service AM	PM
1	Doolittle Dr. & Driveway 1	CSS	Future Intersection				18.7	13.5	C	B
2	Doolittle Dr. & Williams St.	TS	29.6	34.1	C	C	32.1	36.2	C	D
3	Driveway 2 & Williams St.	CSS	13.0	17.5	B	C	15.2	20.9	C	C

1 Per the Highway Capacity Manual (HCM 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.

2 CSS = Cross-street Stop; TS = Traffic Signal; CSS = Improvement

6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for Opening Year Cumulative (2024) traffic conditions are based on the peak hour or planning level (ADT) volume-based traffic signal warrants. There are no study area intersections anticipated to meet traffic signal warrants for Opening Year Cumulative (2024) Without and With Project traffic conditions (see Appendix 6.3 and Appendix 6.4).

6.6 DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

The study area intersections are anticipated to operate at an acceptable LOS for Opening Year Cumulative (2024) traffic conditions. As such, no additional improvements aside from those that are needed to facilitate site access have been recommended.

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7 REFERENCES

1. **City of Whittier.** *Vehicle Miles Traveled (VMT) Transportation Study Guidelines.* Whittier : s.n., October 2021.
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6. **City of San Leandro.** *San Leandro 2035 General Plan.* City of San Leandro : s.n., Adopted September 19, 2016.

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