Section 3.7
Ground Transportation

SECTION SUMMARY

This section describes existing ground transportation within the Port and surrounding area, and addresses the potential impacts that could result from implementation of the proposed Project or an alternative. The proposed Project would improve the container-handling efficiency of the existing YTI Terminal, and add additional operational track to the TICTF, thereby increasing the throughput capacity of the terminal from 1,692,000 TEUs annually to 1,913,000 TEUs annually by 2026. The increase in capacity of the terminal would increase truck trips and rail activity, thereby potentially increasing congestion on area roadways and at rail crossings.

Section 3.7, Ground Transportation, provides the following:

- A description of existing levels of traffic in the Port area;
- a discussion on the methodology used to determine whether the proposed Project or alternatives would result in an impact on ground transportation;
- an impact analysis of both the proposed Project and alternatives; and
- a description of any mitigation measures proposed to reduce any potential impacts, as applicable.

Key Points of Section 3.7:

The proposed Project would make infrastructure improvements to an existing container terminal, and its operations would be consistent with other uses and container terminals in the proposed Project area. The alternatives evaluated included the No Project Alternative, the No Federal Action Alternative, and a Reduced Project Alternative. The analysis determined that construction and operation of the proposed Project or an alternative would not result in significant ground transportation impacts to roadways, rail, or other modes of ground transportation under CEQA or NEPA, and that no mitigation would be required.

3.7.1 Introduction

This section provides a summary of the transportation/circulation impact analysis for the proposed Project and alternatives. The transportation analysis includes ten freeway/roadway segments and 17 key intersections that would be used by truck and automobile traffic to gain access to and from the proposed project site. These include the nearest Congestion Management Program (CMP) monitoring stations, assessed in conformance with Los Angeles County Metropolitan Transportation Authority (Metro) CMP guidelines (Metro 2010), and additional roadway facilities within the study area. The technical traffic impact data are included in Appendix D.

In addition, an analysis of the proposed Project's and alternatives' potential rail-related impacts is included.

3.7.2 Environmental Setting

3.7.2.1 Regional and Local Access

The proposed project site is on Terminal Island, within an industrial area south of the Inner Harbor area of the Port of Los Angeles. The site is within the Port of Los Angeles Community Plan area in the City of Los Angeles, which is adjacent to the communities of San Pedro and Wilmington, and approximately 20 miles south of downtown Los Angeles. The site is on the northern side of New Dock Street, west of Pier S Way.

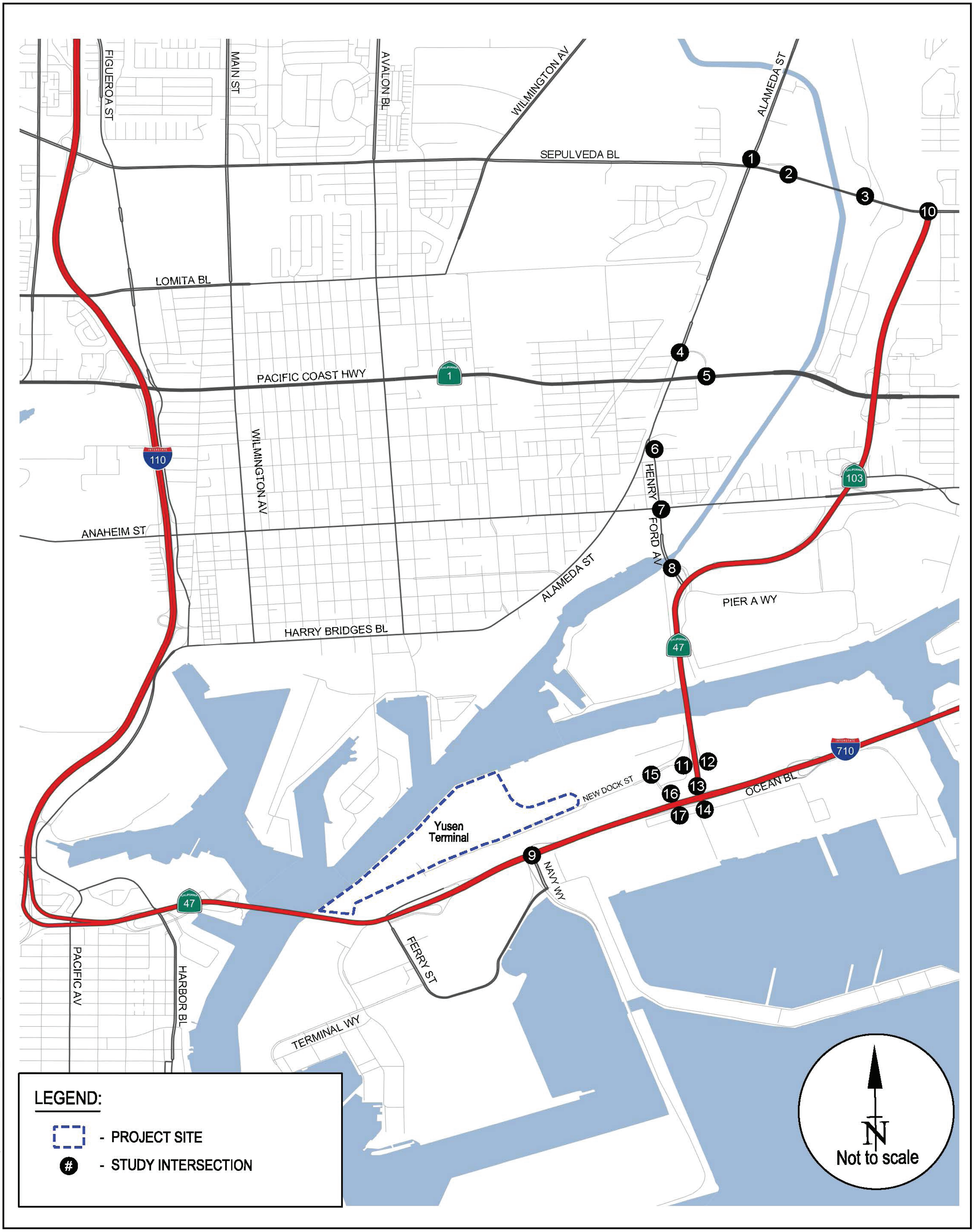
Access to and from the YTI Terminal/proposed project site is provided by a network of freeways and arterial routes, as shown on Figure 3.7-1. The freeway network consists of the Artesia Freeway (SR-91), the Harbor Freeway (I-110), the Long Beach Freeway (I-710), the San Diego Freeway (I-405), and the Terminal Island Freeway (SR-103/SR-47), while the arterial street network that serves the proposed project area includes Alameda Street, Anaheim Street, Henry Ford Avenue, Ocean Boulevard/Seaside Avenue, Pacific Coast Highway (PCH), Sepulveda Boulevard/Willow Street, New Dock Street, Pier S Way, and Navy Way. A description of these roadways is provided below.

The *Artesia Freeway* (SR-91) is an east-west highway that extends from Vermont Avenue in Gardena east to the junction with the Pomona (SR-60 west of SR-91) and Moreno Valley (SR-60 and I-215 east of SR-91) freeways in Riverside. It has eight general-purpose lanes and two high-occupancy vehicle (HOV) lanes north of the harbor.

The *Harbor Freeway* (I-110) is a north-south highway that extends from Gaffey Street in San Pedro to downtown Los Angeles and Pasadena. It has six general-purpose lanes in the vicinity of the harbor and widens to eight lanes to the north.

The *Long Beach Freeway* (I-710) is a north-south highway that extends from the port area in Long Beach to Valley Boulevard in Alhambra. It has six general-purpose lanes in the vicinity of the harbor and widens to eight lanes to the north.

The *San Diego Freeway* (I-405) is a north-south highway that extends from I-5 in Irvine to I-5 in the Mission Hills district of Los Angeles. It has eight general-purpose lanes and two HOV lanes north of the harbor.



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Source: Raju Associates, Inc

Figure 3.7-1
Project Study Area and Intersections
Berths 212-224 (YTI) Container Terminal Improvements Project

The *Terminal Island Freeway* (SR-103/SR-47) is a short highway that begins at Ocean Boulevard on Terminal Island, where it overlaps with SR-47. It then crosses the Schuyler Heim Bridge, and travels north to its terminus at Willow Street in Long Beach. It has six general-purpose lanes on the southern segment, narrowing to four lanes north of Anaheim Street.

Alameda Street extends north from Harry Bridges Boulevard and serves as a key truck route between the harbor area and downtown Los Angeles. Alameda Street is grade-separated at all major intersections south of SR-91. Alameda Street is striped variously as a four-lane and six-lane roadway in the proposed project area. Ultimately, Alameda Street is planned to be striped for six lanes over most of its length. Alameda Street is classified as a Major Highway Class II in the City of Los Angeles General Plan (City of Los Angeles 1999), and a Major Highway in the City of Carson General Plan.

Anaheim Street is an east-west roadway that extends between Western Avenue (SR-213) in the City of Los Angeles and PCH (SR-1) in Long Beach. Anaheim Street is a four-lane roadway west of Henry Ford Avenue, a five-lane roadway (three eastbound lanes) between Henry Ford Avenue and West 9th Street/East I Street, and a six-lane facility from West 9th Street /East I Street to east of I-710. Anaheim Street is classified as a Major Highway Class II north of the proposed Project site in the City of Los Angeles General Plan.

Henry Ford Avenue provides a connection from the Terminal Island Freeway (SR-47) to Alameda Street. Henry Ford Avenue is a six-lane roadway from the SR-47 to Anaheim Street and a four-lane roadway from Anaheim Street to Alameda Street. Northbound traffic on Alameda Street must use the northern 205 feet of Henry Ford Avenue to continue north on Alameda Street via the intersection with Denni Street. Henry Ford Avenue is classified as a Major Highway Class II in the City of Los Angeles General Plan.

Ocean Boulevard/Seaside Avenue is a four to six-lane roadway that extends east-west near the proposed project site. At the eastern Los Angeles city boundary, Seaside Avenue is renamed Ocean Boulevard in Long Beach. Ocean Boulevard/Seaside Avenue extends from Belmont Shore in Long Beach, over the Gerald Desmond Bridge, to its terminus at the Terminal Island Freeway. Ocean Boulevard/Seaside Avenue is designated as I-710 between I-710 and SR-47.

Pacific Coast Highway (SR-1) is a four- to six-lane arterial highway that extends east-west north of the proposed project site. PCH has interchanges with the I-710 freeway and the Terminal Island Freeway (SR-47/SR-103), and connects to Alameda Street via East “O” Street. PCH is classified as a Major Highway Class II north of the proposed Project site in the City of Los Angeles General Plan.

Sepulveda Boulevard/Willow Street is a four-lane roadway that extends east-west north of the proposed project site. Trucks are prohibited on Sepulveda Boulevard east of the Terminal Island Freeway (SR-103). Sepulveda Boulevard is classified as a Major Highway Class II in the City of Los Angeles General Plan and a Major Highway in the City of Carson General Plan. East of the Terminal Island Freeway (SR-103), Sepulveda Boulevard turns into Willow Street, and is classified as a Major Arterial in the City of Long Beach General Plan.

New Dock Street is an internal Port of Los Angeles roadway that runs in an east-west direction and provides primary access to the proposed project site (YTI Terminal). This roadway generally offers five travel lanes: three lanes in the westbound direction and two lanes in the eastbound direction. New Dock Street provides access (via northbound on- and southbound off-ramps) to the Terminal Island (SR-47) Freeway. Parking is not allowed on either side of the street.

Pier S Avenue is an internal Port roadway that runs in a north-south direction from New Dock Street to Ocean Boulevard. This roadway generally offers six travel lanes, three lanes in each direction. Parking is not allowed on either side of the street.

Navy Way is an internal Port roadway that provides local access to Pier 300 and Pier 400 from Seaside Avenue/Ocean Boulevard and the Terminal Island Freeway (SR-47/SR-103). Navy Way is generally a four-lane north-south roadway, although south of the Terminal Way intersection, the southbound lanes turn into a single lane until the Seaside Way/Ocean Boulevard westbound off-ramp merges to form two southbound lanes. Navy Way is unclassified in the City of Los Angeles General Plan.

The traffic setting for the proposed Project includes those streets and intersections that would be used by both automobile and truck traffic to gain access to and from the proposed project site or potentially affected by rail crossings. Seventeen study intersections that are located near or on routes serving the proposed project site were chosen for analysis. Proposed project-related traffic on streets farther away from the proposed project site would decrease due to expected dissipation, and it can be reasonably concluded that the proposed project-related traffic would be less than the number of trips that would require analysis per the City of Los Angeles Department of Transportation (LADOT), City of Long Beach, or City of Carson traffic impact study guidelines. The 17 study intersections include the following (see Figure 3.7-1 for study intersection locations):

1) Alameda Street/Sepulveda Boulevard ramp (on Sepulveda)—City of Carson

2) Alameda Street/Sepulveda Boulevard ramp (on Alameda)—City of Carson

3) Intermodal Way/Sepulveda Boulevard—City of Carson

4) Alameda Street/PCH ramp/East “O” Street (on Alameda)—City of Los Angeles

5) Alameda Street/PCH ramp/East “O” Street (on PCH)—City of Los Angeles (CMP arterial monitoring station)

6) Alameda Street/Henry Ford Avenue/Denni Street—City of Los Angeles

7) Henry Ford Avenue/Anaheim Street—City of Los Angeles

8) Henry Ford Avenue/SR-47 ramps/Pier A Way—City of Los Angeles

9) Navy Way/Seaside Avenue—City of Los Angeles

10) Terminal Island Freeway (SR-103)/Willow Street—City of Long Beach

11) Terminal Island Freeway (SR-47) southbound off-ramp/New Dock Street—City of Long Beach

12) Terminal Island Freeway (SR-47) northbound on-ramp/New Dock Street—City of Long Beach

13) Terminal Island Freeway (SR-47)/Ocean Boulevard westbound—City of Long Beach

14) Terminal Island Freeway (SR-47)/Ocean Boulevard eastbound—City of Long Beach

15) Pier S Avenue/New Dock Street—City of Long Beach

16) Pier S Avenue/Ocean Boulevard westbound—City of Long Beach

17) Pier S Avenue/Ocean Boulevard eastbound—City of Long Beach

A traffic impact analysis is required at the following locations, pursuant to the Los Angeles County CMP (Metro 2010):

- CMP arterial monitoring intersections, including freeway on- or off-ramps, where the proposed Project would add 50 or more trips during either the A.M. or P.M. weekday peak hours.
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the A.M. or P.M. weekday peak hours.

According to the CMP requirements, proposed project alternatives are only required to be compared to a future condition; i.e., growth in cargo at the terminal is permitted to be assumed (Metro 2010). However, to be conservative and in compliance with CEQA, all proposed project alternatives are compared to the CEQA baseline, in which no growth in container volumes or traffic is assumed at the YTI Terminal.

Three CMP arterial monitoring stations are located either in or within five miles of the proposed project study area. However, only one CMP arterial monitoring station, the intersection of Alameda Street and PCH (study intersection #5), is projected to experience 50 or more proposed Project-related trips during the A.M. or P.M. peak period. The three CMP arterial monitoring stations are:

- PCH/Santa Fe Avenue (not a study intersection—less than 50 peak hour trips added by the proposed Project);
- Alameda Street/ PCH (study intersection #5); and
- PCH/Figueroa Street (not a study intersection—less than 50 peak hour trips added by the proposed Project).

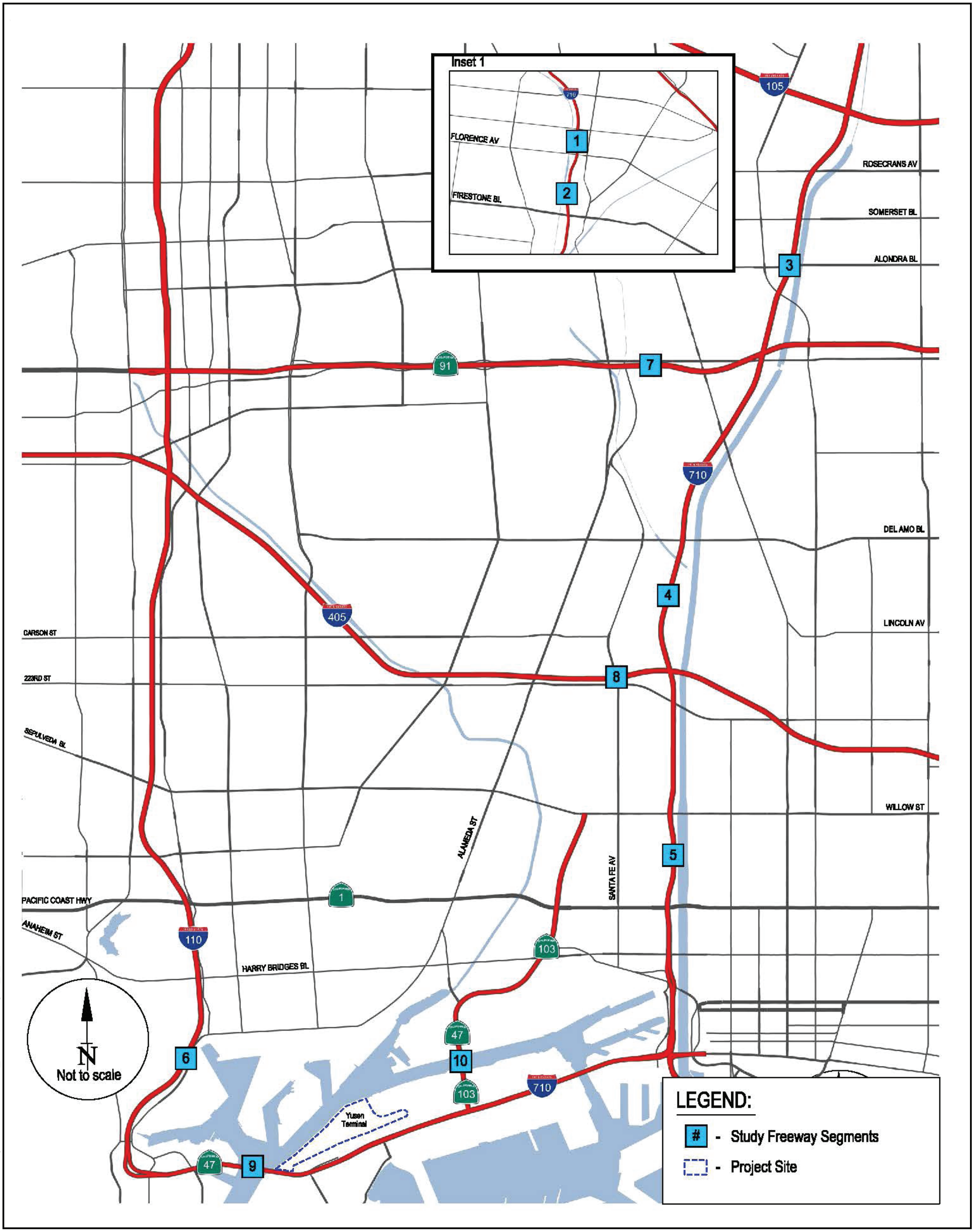
The closest freeway monitoring stations include I-710 at Willow Street and I-110 at "C" Street; these are within 5 miles of the proposed project site (see Figure 3.7-2 for illustration of study area freeway segment locations). The proposed Project would add less than 150 trips at these two freeway monitoring locations. However, to be conservative in the assessment of potential impacts, the following CMP freeway monitoring stations and additional freeway segments were analyzed:

1) I-110 south of C Street (CMP freeway monitoring station—south of “C” Street);
2) SR-91 west of I-710 (CMP freeway monitoring station—east of Alameda Street and Santa Fe Avenue interchange);
3) I-405 between I-110 and I-710 (CMP freeway monitoring station—at Santa Fe Avenue);
4) I-710 north of PCH (CMP freeway monitoring station—north of Jct. SR-1 [PCH], Willow Street);
5) I-710 north of I-405 (CMP freeway monitoring station—north of Jct. I-405, south of Del Amo Boulevard);
6) I-710 north of Firestone Boulevard (CMP freeway monitoring station—north of Jct. I-105, north of Firestone Boulevard);
7) I-710 north of Florence Boulevard;
8) I-710 at Alondra Boulevard;
9) SR-47 at Vincent Thomas Bridge; and
10) SR-47 at Commodore Schuyler Heim Bridge.

3.7.2.2 Existing Area Traffic Conditions

Existing truck and automobile traffic along study roadways and intersections, including automobiles, Port trucks, and other truck and regional traffic not related to the Port, was determined by collecting vehicle turning movement counts classified by vehicle type at the study locations. These weekday A.M. (7:00 to 9:00 A.M.), mid-day (M.D.; 1:00 to 3:00 P.M.), and P.M. (4:00 to 6:00 P.M.) traffic counts were collected in 2012 and 2013. Due to construction activity at certain locations at the time the 2013 counts were conducted, consistent single year 2012 counts were utilized in the assessment of existing area traffic conditions in concurrence with the Port of Los Angeles Goods Movement Division. Additionally, daily classification counts were conducted at the entry/exit gates that serve the proposed Project site in 2013 and were utilized in the calibration of the PortTAM Model.

The peak hour at each intersection is determined from traffic counts collected above by assessing the highest volume of total traffic occurring during one consecutive hour at each location. Regional traffic occurring during the A.M. and P.M. peak hours is mainly due to commute trips, school trips, and other background trips. While the peak hour for Port-related truck traffic generally occurs sometime during the M.D. period, greater overall levels of traffic occur during the A.M. and P.M. peak hours due to the greater level of regional vehicular traffic combined with Port-related traffic. Port traffic forecasts indicate a more even traffic distribution throughout the day in future years, thus minimizing the M.D. peak. The data indicate that, for study intersections, the A.M. or



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Source: Raju Associates, Inc

Figure 3.7-2
Study Area Freeway Segments
Berths 212-224 (YTI) Container Terminal Improvements Project

P.M. peak hour represents the highest level of traffic and therefore the "worst case" for purposes of the traffic operations analysis. However, the traffic analysis presents the results from the A.M., M.D., and P.M. peak hours.

- For study intersections #1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #13, #14, #16, and #17, A.M., M.D., and P.M. period traffic volumes were obtained from traffic count data that was collected from other recent Port projects in the vicinity of the proposed project location.
- For intersection #11, A.M. and P.M. period traffic volumes were obtained from traffic count data that was collected from other recent port projects in the vicinity of the proposed project location. The M.D. peak traffic volumes for this location were calculated based on traffic count data at adjacent intersections.
- For intersections #12 and #15, the A.M., M.D., and P.M. peak traffic volumes for these locations were calculated based on traffic count data at adjacent intersections.

Raw traffic count data are presented in Appendix D. Level of Service (LOS) is a qualitative indication of an intersection's operating conditions as represented by traffic congestion and delay and the volume to capacity (V/C) ratio. For intersections, it is measured from LOS A (excellent conditions) to LOS F (very poor conditions), with LOS D (V/C of less than 0.900, fair conditions, for signalized intersections; delay of less than 35.0 seconds, fair conditions, for unsignalized intersections) typically considered to be the threshold of acceptability. The relationship between V/C ratio and delay, and LOS for signalized and unsignalized intersections is shown in Table 3.7-1.

Table 3.7-1: Level of Service Criteria—Intersections

Signalized Intersections (V/C Ratio)	Unsignalized Intersections (delay [seconds])	LOS	Traffic Conditions
0 to 0.600	≤10.0	A	Excellent. Little or no delay/congestion. No vehicle waits longer than one red light, and no approach phase is fully used.
>0.601 to 0.700	>10.0 and ≤15.0	B	Very Good. Slight congestion/delay. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
>0.701 to 0.800	>15.0 and ≤25.0	C	Good. Moderate delay/congestion. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
>0.801 to 0.900	>25.0 and ≤35.0	D	Fair. Significant delay/congestion. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.

Table 3.7-1: Level of Service Criteria—Intersections

Signalized Intersections (V/C Ratio)	Unsignalized Intersections (delay [seconds])	LOS	Traffic Conditions
>0.901 to 1.000	>35.0 and ≤50.0	E	Poor. Extreme congestion/delay. Represents the most vehicles that the intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
> 1.000	>50.0	F	Failure. Intersection failure/gridlock. Backups from nearby locations or cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: TRB 1980; Transportation Research Board 2010

The study intersections are located in the City of Los Angeles, the City of Long Beach, and the City of Carson. For purposes of this analysis, the locally defined thresholds for significance at intersections are used. Although the City of Los Angeles has a different method to assess intersection operating conditions than that used by the Cities of Long Beach and Carson, the methodologies are similar and generally yield similar results and conclusions.

For intersections in the City of Los Angeles, levels of service were assessed using the LADOT Critical Movement Analysis (CMA) method as published in the *Los Angeles Department of Transportation Traffic Study Policies and Procedures* (LADOT 2010). For signalized intersections, LOS values were determined by using CMA methodology contained in the Transportation Research Board's Circular No. 212 – Interim Materials on Highway Capacity (TRB 1980).

Consistent with City of Long Beach guidelines for analyses, traffic conditions in the vicinity of the proposed Project and within City of Long Beach jurisdiction were analyzed using an intersection capacity-based methodology known as the *Intersection Capacity Utilization Methodology*, referred to hereinafter as the ICU Methodology.

LOS analysis for the City of Carson intersections was conducted using the ICU Methodology (the same methodology as the City of Long Beach intersections).

For this analysis, it is assumed that trucks use more roadway capacity than automobiles because of their size, weight, and acceleration capabilities when compared to autos. The concept of passenger car equivalent (PCE)[1] is used in the study to adjust for the effect of trucks in the traffic stream. A PCE factor of 1.1 was applied to tractors (bobtails), and a PCE factor of 2.0 was applied to chassis and to the container truck volumes for the LOS calculations. This means tractors are calculated as using 10% more roadway capacity than autos, and chassis and container trucks are calculated as using 100% more roadway

[1] PCE is defined as the amount of capacity in terms of passenger cars used by a single heavy vehicle of a particular type under specified roadway, traffic, and control conditions.

capacity than autos. These factors are consistent with factors applied in previous port studies, including the *Draft Port of Los Angeles Baseline Transportation Study* (*Baseline Transportation Study*) (POLA 2004). They are also consistent with subsequent work conducted for various environmental studies in the Port area.

Many of the methodologies employed in this EIS/EIR technical traffic analysis are based on, and consistent with, the methodologies developed for the *Baseline Transportation Study*. This includes a computerized traffic analysis tool called the Port Area Travel Demand Model, the trip generation methodology, and the intersection analysis methodologies. However, the *Baseline Transportation Study* was not conducted specifically for this proposed Project, and the precise assumptions and figures used in preparation of this EIS/EIR are proposed Project-specific. The Port Area Travel Demand Model has been updated to integrate with the Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan model.

State Highway and Metro Congestion Management Program (CMP) Analyses

In accordance with the California Department of Transportation's (Caltrans') "Guide for the Preparation of Traffic Impact Studies" (December 2002), several freeway mainline segments were analyzed for potential impacts. The locations analyzed were over and above those that are prescribed by the Metro CMP Traffic Impact Analysis (TIA) Guidelines, which are as follows:

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the proposed Project would add 50 or more trips to the intersection during either the A.M. or P.M. weekday peak hours.
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips, in either direction, during either the A.M. or P.M. weekday peak hours.

Pursuant to Caltrans' traffic study requirements, freeway roadway segments were analyzed using the operational analysis methodology provided in the *Highway Capacity Manual* (2010 HCM). For those locations projected to be operating at LOS F, the freeway segments were also analyzed in compliance with the County of Los Angeles CMP (Metro 2010) to utilize V/C ratio to determine LOS.

The 2010 HCM is a fundamental reference document that incorporates the latest research on highway capacity and quality of service. The 2010 HCM uses density (in passenger cars per mile per lane) to define LOS. The relationship between density and LOS for freeway segments is shown Table 3.7-2.

Table 3.7-2: Freeway Level of Service Criteria

Freeway Level of Service (LOS)	Density in passenger cars/mile/lane
A	< = 11
B	> 11–18
C	> 18–26
D	> 26–35
E	> 35–45
F	> 45

Source: Transportation Research Board 2010

The CMP is the official source of data for regional coordination of traffic studies in the County of Los Angeles. The CMP uses the V/C ratio to determine LOS. The relationship between the V/C ratio and LOS for freeway segments per the CMP is shown in Table 3.7-3.

Table 3.7-3: Freeway CMP Level of Service Criteria

Freeway Level of Service (LOS)	Volume/Capacity Ratio
A	0.01–0.35
B	>0.35–0.54
C	>0.54–0.77
D	>0.77–0.93
E	>0.93–1.00
F(0)	>1.00–1.25
F(1)	>1.25–1.35
F(2)	>1.35–1.45
F(3)	>1.45

Source: Metro 2010

LOS F(1) through F(3) designations are assigned where severely congested (less than 25 mph) conditions prevail for more than one hour, converted to an estimate of peak hour demand in the table above.

CMP arterial monitoring stations were also analyzed in compliance with the County of Los Angeles CMP guidelines (Metro 2010). However, since the County of Los Angeles CMP guidelines permit intersection LOS calculations to be conducted using the CMA/Circular 212 method (the same analysis method used by the City of Los Angeles), no additional CMP analysis is required at CMP arterial monitoring stations.

Levels of Service Analysis

Based on peak-hour traffic volumes and V/C ratios, the corresponding LOS at study area intersections has been determined and is summarized in Table 3.7-4. The data in the table indicate that all of the existing study intersections currently operate at LOS B or better during the peak hours. The baseline volumes at the CMP monitoring stations and other freeway segments in the study area were obtained from 2012 Caltrans traffic counts. The baseline freeway volumes, density, and LOS are shown in Table 3.7-5.

Table 3.7-4: CEQA Baseline (2012) Intersection Level of Service

		CEQA Baseline (2012)					
		A.M.		M.D.		P.M.	
Int #	Analysis Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	A	0.399	A	0.439	A	0.533
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	A	0.586	A	0.492	B	0.644
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.402	A	0.407	A	0.453
4	Alameda Street / PCH ramp (on Alameda) [2]	A	0.270	A	0.280	A	0.382
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.395	A	0.356	A	0.454
6	Henry Ford Avenue/ Denni Street [2]	A	0.061	A	0.175	A	0.223
7	Henry Ford Avenue / Anaheim Street [2]	A	0.296	A	0.423	A	0.544
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	A	0.080	A	0.141	A	0.173
9	Navy Way / Seaside Avenue [2]	A	0.387	A	0.332	A	0.575
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.457	A	0.495	B	0.631
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	B	10.5	A	9.1	B	10.0
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	A	7.0	A	7.3	A	7.6
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [3]	A	0.305	A	0.369	A	0.349
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [3]	A	0.246	A	0.358	A	0.375
15	Pier S Avenue / New Dock Street [3]	A	0.309	A	0.387	A	0.362
16	Pier S Avenue / Ocean Boulevard westbound [3]	A	0.284	A	0.315	A	0.346
17	Pier S Avenue / Ocean Boulevard eastbound [3]	A	0.236	A	0.358	A	0.355

Notes:
[1] City of Carson intersection analyzed using ICU methodology according to City standards.
[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[4] City of Long Beach unsignalized intersections analyzed using 2010 HCM Stop-Control methodology according to City standards.

Table 3.7-5: CEQA Baseline (2012) Freeway Level of Service

		Northbound / Eastbound						Southbound / Westbound					
		A.M. Peak Hour			P.M. Peak Hour			A.M. Peak Hour			P.M. Peak Hour		
Freeway	Location	Demand or Volume	Density (pc/mi/ln)	LOS	Demand or Volume	Density (pc/mi/ln)	LOS	Demand or Volume	Density (pc/mi/ln)	LOS	Demand or Volume	Density (pc/mi/ln)	LOS
#1 I-710	north of Florence Avenue[1]	8,916	45.9	F	7,264	31.7	D	7,291	31.8	D	8,122	38.0	E
#2 I-710	north of I-105 and north of Firestone Boulevard (CMP monitoring station)	8,929	46.1	F	8,003	37.0	E	8,227	38.9	E	8,739	43.9	E
#3 I-710	Alondra Boulevard[1]	7,619	25.2	C	8,768	30.1	D	9,832	35.9	E	7,808	25.9	C
#4 I-710	north of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	7,104	34.5	D	7,699	38.3	E	8,002	40.7	E	7,021	34.0	D
#5 I-710	north of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	5,943	40.0	E	5,724	37.8	E	6,759	51.9	F	6,148	42.4	E
#6 I-110	south of C Street (CMP monitoring station—south of "C" St)	4,598	18.8	C	3,127	12.8	B	3,284	13.4	B	4,575	18.7	C
#7 SR-91	west of I-710 (CMP monitoring station—east of Alameda St/ Santa Fe Ave interchange)	7,829	21.4	C	9,129	25.2	C	9,841	27.6	D	7,082	19.3	C
#8 I-405	between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,854	53.5	F	9,238	32.5	D	7,526	24.8	C	11,313	47.5	F
#9 SR-47	Vincent Thomas Bridge[1]	2,466	23.9	C	2,690	26.0	D	2,199	21.3	C	3,015	29.2	D

Table 3.7-5: CEQA Baseline (2012) Freeway Level of Service

		Northbound / Eastbound						Southbound / Westbound					
		A.M. Peak Hour			P.M. Peak Hour			A.M. Peak Hour			P.M. Peak Hour		
Freeway	Location	Demand or Volume	Density (pc/mi/ln)	LOS	Demand or Volume	Density (pc/mi/ln)	LOS	Demand or Volume	Density (pc/mi/ln)	LOS	Demand or Volume	Density (pc/mi/ln)	LOS
#10 SR-47	Commodore Schuyler Heim Bridge[1]	442	2.9	A	1,021	6.6	A	756	4.9	A	791	5.1	A

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane [pc/mi/ln]).
[1]Non-CMP location.

As shown in Table 3.7-5, the following freeway segments are operating at LOS F:

- I-710 north of Florence Avenue (northbound A.M. peak hour);
- I-710 north of I-105 south of Firestone Boulevard (northbound A.M. peak hour);
- I-710 north of PCH south of Willow Street (southbound A.M. peak hour); and
- I-405 at Santa Fe Avenue (northbound A.M. peak hour); (southbound P.M. peak hour).

3.7.2.3 Existing Transit Service

Several transit agencies provide service in the vicinity of the proposed project site, including Metro, the Municipal Area Express, Long Beach Transit, Torrance Transit, and LADOT. Together, these transit agencies operate 12 transit routes within and/or near the proposed Project, which are summarized in Table 3.7-6 and below.

Table 3.7-6: 2012 Baseline Transit Service

Transit Agency	Line	Route Name	Days of Operation	Headways/Frequency	
Metro	Express 450	San Pedro-Harbor Gateway-Los Angeles-Downtown LA	Monday–Friday	A.M.	30–35 minutes
				P.M.	30–60 minutes
			Saturday Peak		45-50 minutes
	Local 202	Willowbrook–Compton–Wilmington	Monday–Friday	A.M.	60 minutes
				P.M.	60 minutes
			Saturday Peak		-
	Local 232	Long Beach-LAX via Sepulveda Boulevard	Monday–Friday	A.M.	20–40 minutes
				P.M.	20–40 minutes
			Saturday Peak		30 minutes
	Local 246	San Pedro-Artesia Transit Center via Pacific Avenue and Avalon Boulevard	Monday–Friday	A.M.	20–25 minutes
				P.M.	20 minutes
			Saturday Peak		20 minutes

Table 3.7-6: 2012 Baseline Transit Service

Transit Agency	Line	Route Name	Days of Operation	Headways/Frequency	
Torrance Transit	Municipal Area Express 3X	San Pedro–El Segundo	Monday–Friday	A.M.	20–30 minutes
				P.M.	20–30 minutes
			Saturday Peak		-
	T3	Redondo Beach–Long Beach	Monday–Friday	A.M.	15 minutes
				P.M.	15 minutes
			Saturday Peak		60 minutes
	T7	Redondo Beach-Carson	Monday–Friday	A.M.	60 minutes
				P.M.	60 minutes
			Saturday Peak		60 minutes
Long Beach Transit	171	Long Beach-Seal Beach via Pacific Coast Highway	Monday–Friday	A.M.	20 minutes
				P.M.	20 minutes
			Saturday Peak		45 minutes
	176	Long Beach-Signal Hill-Lakewood via PCH & Lakewood Blvd.	Monday–Friday	A.M.	30 minutes
				P.M.	30 minutes
			Saturday Peak		-
Carson Circuit Transit	Route C	Carson Area	Monday–Friday	A.M.	40 minutes
				P.M.	40 minutes
			Saturday Peak		40 minutes
LADOT Commuter Express	142	San Pedro–Long Beach	Monday–Friday	A.M.	30 minutes
				P.M.	30 minutes
			Saturday Peak		30 minutes
LADOT DASH	LDWLM	Wilmington Area	Monday–Friday	A.M.	15 minutes
				P.M.	15 minutes
			Saturday Peak		15 minutes

Metro Express Line 450 (San Pedro-Harbor Gateway-Los Angeles-Downtown Los Angeles). Metro Transit Line 450 provides express bus service from downtown Los Angeles to San Pedro via the Harbor Freeway. Line 450 starts at 5th Street and Beaudry Street in downtown Los Angeles and travels south to its final destination in San Pedro at Pacific Avenue and 21st Street. Days of operation are Monday through Sunday, including all major holidays. The A.M. and P.M. peak period headway (time between vehicles in a transit system) ranges between 30 minutes and one hour. Saturday M.D. peak period headway ranges between 45 and 50 minutes.

Metro Local Line 202 (Willowbrook-Compton-Wilmington). Metro Transit Line 202 is a north-south local service that travels from Wilmington to Willowbrook along Alameda Street. Line 202 provides service from the Metro Blue Line, connecting at the

Del Amo Blue Line Station. Days of operation are Monday through Friday only. Weekday A.M. and P.M. peak period headway is approximately one hour. Late Night and Owl service is provided between Compton and Willowbrook Monday through Sunday, including all major holidays.

Metro Local 232 (Long Beach-LAX via Sepulveda Boulevard). Metro Transit Line 232 is a north-south route between El Segundo and Harbor City, and an east-west route between Harbor City and Long Beach. Line 232 connects to the Metro Blue Line in downtown Long Beach. The A.M. and P.M. peak period headway ranges between 20 and 40 minutes. Saturday peak period headway is 30 minutes.

Metro Local 246 (San Pedro-Artesia Transit Center via Pacific Avenue and Avalon Boulevard). Metro Transit Line 246 is a north-south route that travels from San Pedro to the Artesia Transit Center in Los Angeles. Line 246 traverses Line 247 between the Artesia Transit Center and Pacific Avenue and Front Street in San Pedro. At Pacific Avenue and Front Street, Line 246 continues south along Pacific Avenue to Paseo Del Mar and Gaffey Street. The A.M. and P.M. peak period headway ranges between 20 and 25 minutes. Saturday peak period headway is 20 minutes.

Municipal Area Express 3X (San Pedro-El Segundo Freeway Express). Municipal Area Express 3X is a commuter bus service designed to address the commuting needs of South Bay residents who work in the El Segundo employment district. Line 3X is a special freeway express route that operates directly from San Pedro to El Segundo, starting at 25th Street near the U.S. Air Force housing and ending at South La Cienega Boulevard near the Airport Courthouse. Days of operation are Monday through Friday only, excluding major holidays. The A.M. and P.M. peak period headway ranges from 20 to 30 minutes.

Torrance Transit Line 3 (Redondo Beach-Downtown Long Beach). Torrance Transit Line 3 is an east-west route between Redondo Beach and Carson, a north-south route between Carson and Wilmington, and an east-west route between Wilmington and downtown Long Beach. Line 3 travels along PCH through the proposed project area via PCH. The A.M. and P.M. peak period headway is approximately 15 minutes. Saturday M.D. peak period headway is 60 minutes.

Torrance Transit Line 7 (Redondo Beach-Carson). Torrance Transit Line 7 is an east-west route between Redondo Beach and Carson via Sepulveda Boulevard. Line 7 travels along Sepulveda Boulevard through the study area. The A.M. and P.M. peak period headway is approximately 60 minutes. Saturday M.D. peak period headway is 60 minutes.

Long Beach Transit Line 171 (Long Beach-Seal Beach via Pacific Coast Highway). Long Beach Transit Lines 171 and 172 traverse similar routes along PCH between Technology Place and Lakewood Boulevard. From Lakewood Boulevard, Line 171 continues east along PCH to its terminus at Studebaker Road. The A.M. and P.M. peak period headway is approximately 20 minutes. Saturday peak period headway is 45 minutes.

Long Beach Transit Line 176 (Long Beach-Signal Hill-Lakewood via Pacific Coast Highway and Lakewood Boulevard). Long Beach Transit Lines 171 and 176 traverse similar routes along PCH between Technology Place and Lakewood Boulevard. From

Lakewood Boulevard, Line 176 travels north along Lakewood Boulevard to its terminus at the Lakewood Mall. The A.M. and P.M. peak period headway is approximately 30 minutes. This line does not operate on weekends.

Carson Circuit Transit Route C (Clockwise-Counterclockwise Local Service). Route C is a local circular loop route that provides service within the City of Carson. The line runs in a clockwise direction and travels primarily along Avalon Boulevard and Sepulveda Boulevard within the study area. The A.M. and P.M. peak period headway is approximately 40 minutes. Saturday peak period headway is 40 minutes.

LADOT Commuter Express Line 142 (Ports O'Call-Long Beach Transit Mall). LADOT Commuter Express Line 142 runs east-west along Ocean Boulevard through the proposed project area from downtown Long Beach to San Pedro. The A.M. and P.M. peak period headway is approximately 30 minutes. Saturday peak period headway is 30 minutes.

LADOT DASH Wilmington Line (Clockwise-Counterclockwise Local Service). The LADOT DASH Wilmington Line provides local service in the Wilmington community of the City of Los Angeles. Local clockwise service is provided primarily along Figueroa Street, PCH, Watson Avenue, East L Street, Avalon Boulevard, and Anaheim Street. Local counterclockwise service is provided primarily along Wilmington Boulevard, PCH, Avalon Boulevard, Anaheim Street, West C Street, and Hawaiian Avenue. The A.M. and P.M. peak period headway is approximately 15 minutes. Saturday peak period headway is 15 minutes.

3.7.2.4 Rail Transportation Setting

The Ports of Los Angles and Long Beach are served by two Class I railroads: Union Pacific Railroad (UP) and the Burlington Northern Santa Fe Railway (BNSF). Pacific Harbor Line, Inc. (PHL) is a rail switching company that is responsible for building the trains that the mainline rail companies will transport outside the Port Complex, and provides rail switching, maintenance, and dispatching services within the harbor area. Sections 1.2.2.6 and 1.2.3.3 in Chapter 1, Introduction, provide additional detail on rail operations within and outside of the Port Complex.

North of the harbor area, the ports are served by the Alameda Corridor, which was completed in 2002. All harbor-related trains of the UP and the BNSF use the Alameda Corridor to access the railroads' mainlines, which begin near downtown Los Angeles. East of downtown Los Angeles, port-related trains use either the BNSF San Bernardino Subdivision, the UP Los Angeles Subdivision, or the UP Alhambra Subdivision. Refer to Figure 3.7-3 for a map of freight railroad lines.

To transition from the Alameda Corridor to the Alhambra Subdivision, the UP utilizes trackage rights over Metrolink's East Bank Line, which runs parallel to the Los Angeles River on the east side of downtown Los Angeles. The UP Los Angeles Subdivision terminates at West Riverside Junction where it joins the BNSF San Bernardino Subdivision. The BNSF San Bernardino Subdivision continues north of Colton Crossing and transitions to the BNSF Cajon Subdivision. The Cajon line continues north to Barstow and Daggett, and then east toward Needles, CA and beyond. UP trains exercise trackage rights over the BNSF Subdivision from West Riverside Junction to San Bernardino and over the Cajon Subdivision from San Bernardino to Daggett, which is a short distance east of Barstow. The UP Alhambra Subdivision and the BNSF San Bernardino Subdivision cross at Colton Crossing in San Bernardino County. East of Colton Crossing, the UP Yuma Subdivision passes through the Palm Springs area, Indio, and continues to Arizona and beyond.

The BNSF operates intermodal terminals for containers and trailers at: (1) Hobart and Commerce Yards (in the City of Commerce) and (2) San Bernardino Yard. The UP operates intermodal terminals at: (1) East Los Angeles Yard (ELA) at the west end of the UP Los Angeles Subdivision, (2) Los Angeles Transportation Center (LATC) at the west end of the UP Alhambra Subdivision, (3) City of Industry (COI) on the UP Alhambra Subdivision, and (4) the Intermodal Container Transfer Facility (ICTF) near the south end of the Alameda Corridor. In addition, both UP and BNSF operate trains hauling marine containers that originate or terminate at on-dock terminals within the Ports of Los Angeles and Long Beach.

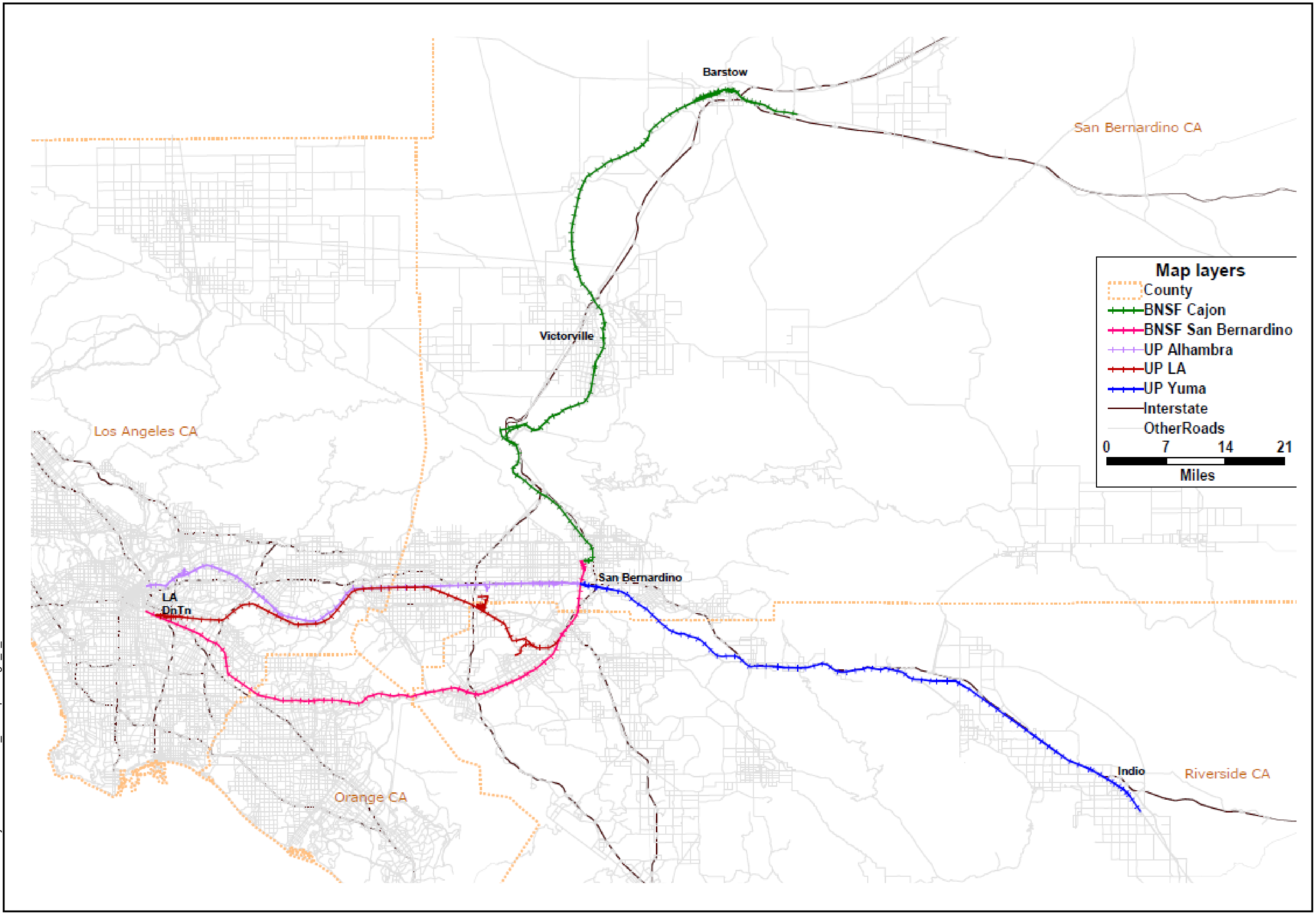
UP also has a large carload freight classification yard at West Colton (at the east end of the Alhambra Subdivision). A large auto unloading terminal is located at Mira Loma (mid-way between Pomona and West Riverside on the Los Angeles Subdivision).

The BNSF San Bernardino Subdivision has at least two main tracks. There are segments of triple track between Hobart and Fullerton. The BNSF recently completed a third main track from San Bernardino to the summit of the Cajon Pass. The UP Alhambra Subdivision is mostly single-track, while the UP Los Angeles Subdivision has two main tracks west of Pomona and a mixture of one and two tracks east of Pomona. North from West Colton, UP operates the single-track Mojave Subdivision to northern California and Pacific Northwest points. This line closely parallels the BNSF Cajon Subdivision as the two lines climb the southern slope of the Cajon Pass. Connections are afforded at Keenbrook and Silverwood to enable UP trains to enter/exit the main tracks of the BNSF Cajon Subdivision. Beyond Silverwood to Palmdale, the UP Mojave Subdivision has very little train traffic. East from Colton Crossing to Indio, UP operates its transcontinental Sunset Route main line, also known as the UP Yuma Subdivision. The line now has two main tracks the entire distance to Indio. East of Indio, the Sunset Route still has stretches of single track, but construction of a second main track is underway.

In March 2013, the Los Angeles Harbor Commission certified the final EIR and approved the Southern California International Gateway (SCIG) intermodal railyard, which is designed to increase the efficiency and competitiveness of moving containerized cargo through both the Ports of Los Angeles and Long Beach. Initially, SCIG is expected to handle approximately 570,800 TEUs. By 2035, SCIG is projected to handle a maximum of 2,800,000 TEUs. The near-dock rail container transfer facility is expected to open in 2016 and would be developed and operated by the BNSF on a 185-acre site approximately 4 miles north of the San Pedro Bay port complex. The project is expected to reduce truck traffic, freeway congestion, and air pollution by eliminating approximately 1,300,000 truck trips annually along a 24-mile stretch of the Long Beach (710) Freeway to BNSF's Hobart Yard near downtown Los Angeles.

Geographic Study Rail Lines and At-Grade Crossings

For the purpose of evaluating rail impacts due to the proposed Project, the geographic study area includes those at-grade crossings that could potentially experience a significant impact due to the proposed Project. The existing and projected increase in rail



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ICF INTERNATIONAL

Figure 3.7-3
Map of Southern California Freight Railroad Lines
Berths 212-224 (YTI) Container Terminal Improvements Project

traffic from the YTI Terminal would access all of the railroads' mainlines; therefore, the geographic study area includes the BNSF San Bernardino Subdivision from Hobart and Commerce Yards to San Bernardino, the BNSF Cajon Subdivision from San Bernardino to Barstow, the UP Alhambra Subdivision from LATC to Colton Crossing, the UP Los Angeles Subdivision from ELA to West Riverside Junction, and the UP Yuma Subdivision from Colton Crossing to Indio. BNSF at-grade crossings between Barstow and the Nevada border and UP at-grade crossings between Indio and Arizona border are in rural areas with low traffic volumes (typically less than 5,000 average daily trips) and therefore are not included in the geographic study. Additionally, the Alameda Corridor is used to transport cargo to downtown railyards, which eliminates 200 rail/street crossings within the San Pedro, Wilmington, Long Beach, and other communities between the Port Complex and downtown Los Angeles.

There are no at-grade crossings on UP Mojave Subdivision between West Colton and Silverwood. The Alameda Corridor eliminated all of the at-grade crossings between the Ports and the intermodal railyards on Washington Boulevard in the Cities of Vernon and Commerce (BNSF's Hobart and Commerce Yards and UP's ELA). On the UP and BNSF rail lines east of these yards, many railway-roadway grade separations have been constructed, but in 2012 about 170 at-grade crossings remain in the geographic study area: 56 of them are along the BNSF San Bernardino Subdivision, 13 along BNSF Cajon Subdivision, 38 along UP Alhambra Subdivision, 40 along UP Los Angeles Subdivision, and 20 along UP Yuma Subdivision.

3.7.3 Applicable Regulations

Traffic analysis in the state of California is guided by policies and standards set at the state level by Caltrans and local jurisdictions. Since the proposed Project is in the City of Los Angeles, it would adhere to the adopted City transportation policies. The cities in the study area have established threshold criteria to determine significant traffic impacts of a proposed project in their jurisdictions.

3.7.3.1 Intersection Operations

In the City of Los Angeles under LADOT guidelines, an intersection would be significantly impacted if a project results in the following:

- V/C ratio increase greater than or equal to 0.04 if final LOS is C;
- V/C ratio increase greater than or equal to 0.02 if final LOS is D; or
- V/C ratio increase greater than or equal to 0.01 if final LOS is E or F.

Intersections operating at LOS A or B after the addition of the proposed project traffic are not considered significantly impacted regardless of the increase in V/C ratio.

The Cities of Long Beach and Carson consider LOS D to be the minimum acceptable LOS. These cities have also established their own thresholds of significance. Consistent with their significance thresholds, in the Cities of Carson and Long Beach, an adverse effect is considered to be a project-related change in V/C ratio of 0.02 or greater if the final LOS is E or F.

3.7.4 Impacts and Mitigation Measures

3.7.4.1 Methodology

Traffic

Impacts were assessed by quantifying differences between baseline conditions and baseline plus project conditions under the proposed Project and the alternatives. For the CEQA analysis presented in this section, baseline conditions are year 2012 traffic volumes, which is consistent with the *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* court decision. A secondary analysis methodology was also performed and can be found in Chapter 4, Cumulative Impacts, which uses a future baseline and is the methodology typically used by experts in identifying traffic impacts for projects of similar scale and for CEQA evaluations prior to the Sunnyvale decision.

Unlike the CEQA baseline, the NEPA analysis baseline is not static and accounts for future non-proposed Project-related background traffic through 2026. NEPA future baseline traffic conditions were estimated by adding funded transportation improvements, traffic due to regional traffic growth, and traffic increases resulting from Port terminal throughput growth, which includes some growth in operations at the YTI Terminal that would occur in the absence of a USACE permit.

Local traffic growth for NEPA analysis was forecast based on a computerized traffic analysis tool known as the Port Area Travel Demand Model, which includes traffic growth for the Port and the local area.

Port AreaTravel Demand Model

The Port Area Travel Demand Model was originally developed for the *Ports of Long Beach and Los Angeles Transportation Study* (POLB and POLA 2001). It was subsequently revised and updated for several efforts including the *Port of Los Angeles Baseline Transportation Study* (POLA 2004). Further, this model was recently updated using SCAG's latest Regional Travel Demand Forecasting Model. Elements of the SCAG Heavy Duty Truck (HDT) model were also used. The use of the SCAG model to account for sub-regional and regional traffic growth beyond the general proximity of the proposed project site is an accepted practice by agencies/ jurisdictions. The SCAG model is used for the region's federally required Regional Transportation Plan (RTP) (SCAG 2012). Also used are the State Implementation Plan and the South Coast Air Quality Management Plan (SCAQMD 2007). TransCAD is the software platform used for modeling. The Port Area Travel Demand Model data is owned by LAHD and is housed and operated at consultant offices.

SCAG Regional Model

The SCAG Regional Model is the basis and "parent" of most subregional models in the Southern California six-county region, comprising Ventura, Los Angeles, Orange, San Bernardino, Riverside, and Imperial Counties. At the regional level, this model has the most comprehensive and current data—for both existing and future conditions—on housing, population, employment, and other socioeconomic input variables used to develop regional travel demand forecasts. The model has more than 4,200 zones, including 90 zones in the Port area, and a complete network of regional transportation infrastructure, including more than 3,520 miles of freeways and over 18,650 miles of major, primary, and secondary arterials.

For purposes of sub-regional transportation analysis (such as at the Port), the SCAG Regional Model provides the most comprehensive and dynamic tool to forecast the magnitude of trips and distribution of travel patterns anywhere in the region. However, by virtue of its design and function, the Regional Model is not (and cannot be) very detailed and precise in any specific area of the region. This is also the case in the Ports of Long Beach and Los Angeles focus area. Therefore, the Port Area Travel Demand Model has been comprehensively updated and detailed in the Port focus area. In addition, typical “post-processing” of model data is used to reflect local conditions.

The SCAG Regional HDT model was developed as an adjunct component to the SCAG Regional Travel Demand Model. The HDT model develops explicit forecasts for heavy duty vehicles with a gross vehicle weight (GVW) of 8,500 pounds and greater. The HDT model includes trip generation, trip distribution, and network traffic assignment modules for heavy duty trucks stratified by three heavy duty truck gross vehicle weight classifications, as follows:

- Light-Heavy—8,500 to 14,000 GVW
- Medium-Heavy—14,000 to 30,000 GVW
- Heavy-Heavy—over 30,000 GVW

The HDT Model utilizes the SCAG Regional Model network for its traffic assignment process without major refinements and additions to the network. However, several network modifications have been implemented, including link capacity enhancements, truck prohibitions, and incorporation of truck PCE factors. All of these were carried forward into the Port Area Travel Demand Model focus area. The presence of vehicles other than passenger cars in the traffic stream affects traffic flow in two ways: (1) these vehicles, which are much larger than passenger cars, occupy more roadway space (and capacity) than individual passenger cars, and (2) the operational capabilities of these vehicles, including acceleration, deceleration, and maintenance of speed, are generally inferior to passenger cars and result in formation of large gaps in the traffic stream that reduce the highway capacity. On long, sustained grades and segments with impaired capacities, where trucks operate considerably slower, formation of these large gaps can have a profound impact on the traffic stream. The Port Area Travel Demand Model takes all of these factors into account.

The TransCAD model uses four periods to forecast traffic over a full 24-hour period: the A.M. period (6:00 A.M. to 9:00 A.M.), the M.D. period (9:00 A.M. to 3:00 P.M.), the P.M. period (3:00 P.M. to 7:00 P.M.), and the night period (7:00 P.M. to 6:00 A.M.). The outputs of the model include daily and peak-period roadway link volumes and speeds and peak-period intersection turning movement volumes.

The following steps describe the development of refined intersection turning movement volumes from model-produced raw forecasts used in the traffic analysis of the proposed Project and alternatives.

- The base year 2012 model scenario and future year model scenarios forecast peak-period intersection turning movement volumes were converted to peak-hour approach and departure volumes by summing the turning movements and applying peak-hour factors of 0.38, 0.18, and 0.28 for A.M., M.D., and P.M. peaks, respectively.
- For each leg (north, south, east, and west) of the study intersections, 2012 model-derived intersection approach and departure volumes were subtracted from the corresponding future-year approach and departure volumes. This calculation yielded a set of approach and departure volumes, which is representative of the growth volume between the base year and future years.
- This estimated growth between the base year and future years was added to ground-count data. This resulted in adjusted future-year approach and departure forecast auto volumes at each leg of the study intersections, which were used to determine the future-year turning movement volumes.
- The B-turn methodology is generally described in the *National Cooperative Highway Research Program Report (NCHRP) 255: Highway Traffic Data for Urbanized Area Project Planning and Design*, Chapter 8. The B-turn method uses the base-year turning movement percentages of each approach volume (based on actual traffic counts) and proceeds through an iterative computational technique to produce a final set of future-year turning movement volumes. The computations involve alternatively balancing the rows (approaches) and the columns (departures) of a turning movement matrix until an acceptable convergence is obtained. The results must be checked for reasonableness, and manual adjustments are sometimes necessary, such as when a change in the model network in a future scenario that would change travel patterns would not be comparable to the base-year model network volumes or existing traffic counts, in which case future raw model volumes would be used.
- Raw future-year model peak-hour trip generation was used to represent the proposed project driveway volumes.

The SCAG model is owned, developed, and housed at SCAG offices, and is used by agencies and consultants for sub-regional planning work, such as for Port environmental studies.

Rail

While impacts to rail within the Port area are required to be addressed in this EIS/EIR, an expanded discussion of the rail transport of goods outside of the Port area is also provided in this environmental document for informational purposes. Sections 1.2.2.6 and 1.2.3.3 in Chapter 1, Introduction, provide additional detail on rail facilities and operations within the Port Complex. The regional rail system in the Inland Empire is not in the vicinity of the proposed Project, and impacts on this system are not required to be evaluated consistent with findings of *City of Riverside vs. City of Los Angeles* (4th App Dist., Div. 3, Case No. G043651) 2011 WL 3527504. In reviewing a Port of Los Angeles environmental impact report for a terminal project located within the Harbor District, the court held: "We conclude neither the City nor the County of Riverside is in the 'vicinity' of the project. The Port did not abuse its discretion by failing to include in the recirculated draft EIR an analysis of rail-related impacts on the City and County of Riverside."

However, because regional rail has been, and continues to be, an important issue to many stakeholders, an analysis of such effects is provided for informational purposes only. The data and informational analysis, which is not required under CEQA, includes a methodology and evaluation criteria for assessing rail impacts. Other regional transportation plans should continue to examine the rail system and provide recommendations for future improvements as appropriate and necessary.

Rail impacts of the proposed Project were assessed by quantifying differences in vehicular delays due to at-grade crossings between baseline conditions and baseline conditions plus the proposed Project.

The LAHD has developed a standard methodology for evaluating potential transportation impacts of port development projects on existing at-grade railroad crossings. Specifically, cargo terminal or intermodal yard projects potentially generate additional freight train movements that could result in additional "gate down" time and motorist delays at existing at-grade crossings.

Impacts of the proposed Project are analyzed in terms of average vehicle delay at the study area at-grade crossings. Average vehicle delay is calculated by dividing the total vehicle delay caused by trains passing a crossing during the peak commute hour by the number of vehicles passing the at-grade crossing in that hour. This is a universally accepted approach for evaluating vehicle delay at signalized intersections consistent with methodologies contained in the 2010 HCM. At-grade crossings operate similarly to traditional signalized intersections, where some vehicles experience no delay (during a green phase or when the gate is up) and others are stopped for a certain period of time (during a red phase or when a train is crossing). While different approaches could be considered, the LOS procedures for signalized intersections were identified as the most logical and consistent approach for assessing the significance of average vehicle delays at at-grade crossings.

Per the 2010 HCM, LOS D includes delays of up to 55 seconds. LOS D is an acceptable LOS at signalized intersections in most urban areas in the Southern California region. Anything exceeding this threshold is generally considered unacceptable.

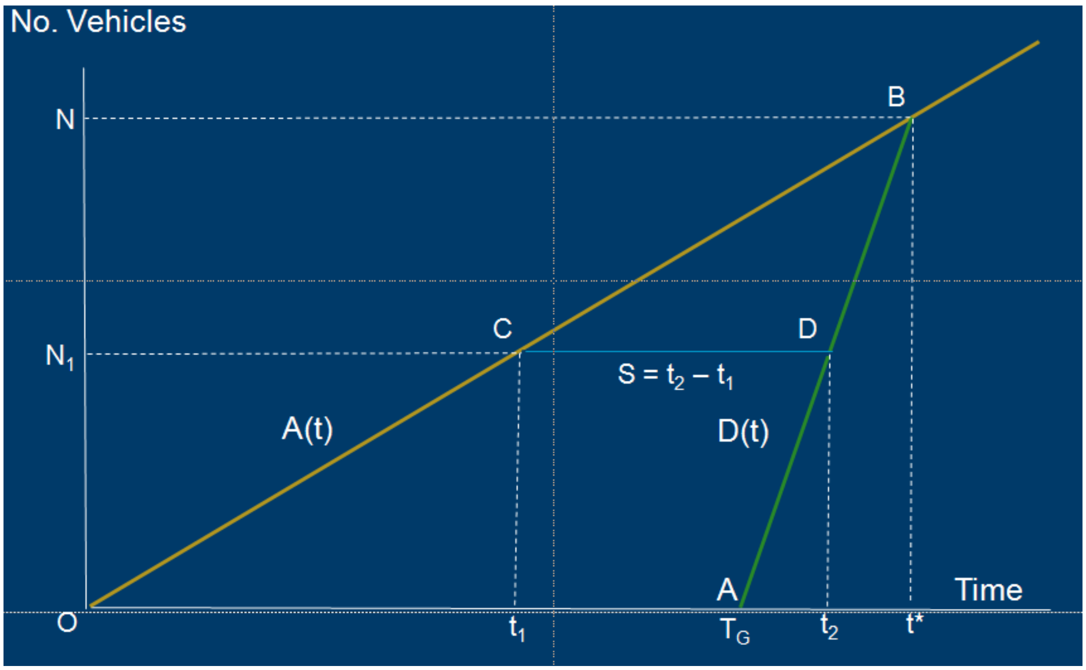
LOS is measured using peak-hour average vehicle delay (PHAVD). PHAVD is based on the train and vehicular volumes and calculated using the following data:

- peak-hour vehicle arrival and departure rates (vehicles per minute per lane);
- gate down time (function of speed and length of train, width of intersection, clearance distance, and lead and lag times of gate operation); and
- total number of vehicles arriving per period.

The methodology for computing vehicular delay is based on Figure 3.7-4, which shows total vehicle arrivals and departures for an isolated at-grade crossing blockage. The yellow line represents vehicles arriving at an at-grade crossing, beginning at the time when the gates go down (point "O" in the figure). Total gate down time is depicted as

"T_G." The green line represents the vehicles departing the queue after the gate is lifted starting at time = T_G (point "A" in the figure). The queues are fully dissipated at time = t* (point "B" in the figure). The total vehicle delay is represented by the area of triangle OAB bounded by the yellow line, the green line, and the "X" axis. The length of line $S = (t_2 - t_1)$ represents the amount of delay experienced by the n^{th} vehicle. Calculating the value of this line for each vehicle arriving at the crossing and then adding those values up is equivalent to computing the area of triangle OAB. This calculation is performed for each train arriving at the crossing over the course of a day. Delay will vary by time of day, because there is more highway traffic during peak hours. Many of the vehicles arriving at the crossing will not be delayed by a train, but they are included in the calculation of average delay. This is the same way that average delay is computed for signalized intersections.

Figure 3.7-4. Total Arrivals and Departures for an Isolated Blockage



Source: Leachman 1984; Powell 1982

The equation for total vehicle delay for an isolated blockage, V, is:

$$V = \left(\frac{1}{2}\right)\frac{qT_G{}^2}{(1 - q/d)}$$

where T_G = gate down time, q = vehicle arrival rate, and d = vehicle departure rate. Note that delay is a function of the square of the gate down time.

Hourly average delay per vehicle is calculated by dividing total delay over one hour by the number of vehicles arriving at the crossing in the same hour.

The calculation of hourly average vehicle delay accounts for the following:

- total vehicles arriving at the crossing in a one-hour period, whether the vehicles are delayed by a train or not;

- total delay experienced by all vehicles in that hour; and
- all trains passing through the crossing in that hour.

The equation above relates to the effects of an isolated blockage; i.e., it is assumed that the vehicle queues are completely dissipated before the next train arrives at the crossing. However, where the rail corridor has more than one track, it is possible that a second train traveling in the opposite direction could arrive at the crossing before the queues from the first train have fully dissipated. More complex delay equations for these "multiple events" have been derived by Dr. Robert Leachman of U.C. Berkeley (Leachman 1984). In an effort to compute these effects and how likely they are to occur, Dr. Leachman simulated railroad traffic for both 2010 and 2035 against streets with varying ADT per lane and recomputed vehicular delays, including the impacts of multiple events. With higher train volumes, multiple events occur more often, and the severity of the impact is greater on streets with more vehicular traffic per lane. Based on a sample of Dr. Leachman's results for different train volumes and ADT per lane, Cambridge Systematics fitted a curve for the calculation of a "Bias Factor." This Bias Factor adjustment accounts for additional delay associated with multiple crossings that overlap in time. The fitted equation for the Bias Factor (BF) is as follows:

$$BF = exp\left(-0.52868 + (.000173) \times \left(\frac{ADT}{Lane}\right) + (0.01036) \times (Total\ Train\ Volume\ per\ Day)\right)$$

The R-squared value for the fitted equation is 0.9322, indicating a very good correlation among the variables. Using this equation, a Bias Factor was computed for each grade crossing that has more than one track crossing the street. The Bias Factor is then multiplied by the unadjusted vehicle hours of delay for an isolated blockage to account for the effects of multiple events. For example, the average Bias Factor for all grade crossings on the BNSF San Bernardino Subdivision for 2012 is approximately 1.023, meaning that the unadjusted delay values are increased by an average of 2.3%.

The LOS definitions/ranges for the intersection operational methodology contained in the 2010 HCM are applied to the PHAVD results.

Rail Volumes

In order to predict at-grade crossing delays on railroad mainlines, it is first necessary to estimate how many containers by market segment are handled at each railyard in Southern California under CEQA Baseline conditions (2012) and in 2026 with the proposed Project. From this information, the number of intermodal trains per day (by type and length) is estimated for each yard. Next, trains by type and length are allocated to specific segments of track, and then combined with non-intermodal and passenger train types. Finally, delays at grade crossings are computed.

CEQA Baseline conditions (2012) rail volumes and Project Trains[2] were estimated using the following:

- detailed annual and peak-month lifts data and projections for containers from/to Los Angeles Harbor Ports terminals;

[2] Project trains are the additional number of trains that are generated due to the Project being in place.

- detailed annual lifts data and projections for the Ports' on-dock intermodal yards containers;
- detailed annual lifts data and projections for off-dock intermodal yards containers, with markets including:
  - direct intermodal containers from the Ports (intact containers that are not transloaded);
  - transloaded containers (cargo that has been first taken out of 40-foot containers at a warehouse and then placed into 53-foot domestic containers before arriving at the railyard); and
  - "pure" domestic cargo and empty containers in either domestic 53-foot containers or trailers (cargo that has not passed through the Ports);
- other rail data and projections developed for the 2013 Port of Los Angeles' Port Master Plan Update and 2012 RTP, with markets including:
  - non-intermodal rail volumes (including bulk, automobiles, and carload); and
  - passenger rail volumes.

The parameters for estimating 2012 peak-month average daily intermodal (containerized) rail volumes include:

- annual lifts handled by individual yards;
- marine terminal specific lifts to TEUs conversion factor;
- monthly peaking factor;
- average rail car length (depends on the mix of cars of varying lengths that make up the trains);
- locomotive length;
- number of locomotives per train for different train lengths;
- slot utilization (percentage of rail car capacity actually used by containers). For example, a 5-well rail car has the capacity for 10 double-stacked containers. If only 9 containers are loaded onto the car, then the slot utilization is 90%;
- market-wise distribution of trains by length (percentage of trains that are 6,000 feet, 8,000 feet, 10,000 feet, and 12,000 feet long, including locomotives); and
- yard-to-segment allocation matrix.

For each intermodal yard and each type of market (direct intermodal, transload, pure domestic, and non-intermodal), trains per day were estimated. Train volumes were then allocated to specific railroad tracks from downtown Los Angeles to Indio and Barstow. For BNSF, 100% of the train volumes were assigned to the BNSF San Bernardino and

Cajon Subdivisions. For UP, 50% of trains were assigned to the Alhambra Subdivision and 50% to the Los Angeles Subdivision. Exceptions to that rule are UP trains loaded at the COI yard, which must use the UP Alhambra Subdivision, and automobile trains loaded at the Mira Loma Yard, which must use the UP Los Angeles Subdivision. UP trains on the Los Angeles Subdivision also use the BNSF San Bernardino Subdivision between West Riverside and Colton Crossing. Beyond the Colton Crossing, it was assumed that 85% of the UP trains would use the Yuma Subdivision to the east and 15% would use the BNSF Cajon Subdivision to the north between Barstow and Keenbrook. Approximately 10% of the UP volumes would use the BNSF Cajon Subdivision between Keenbrook and San Bernardino, and 5% would use the UP Mojave Subdivision between Keenbrook and West Colton.

The 2012 freight train volumes were uniformly distributed over 24 hours and assigned to four different time periods of the day, as shown in Table 3.7-7. For example, the A.M. peak period consists of three hours, or 12.5% of a 24-hour day. 12.5% of the daily estimated freight trains were assigned to the A.M. peak period. Passenger train volumes were allocated to time periods according to actual MetroLink and Amtrak schedules. To validate the assumption that freight trains are uniformly distributed over 24 hours, actual train volumes by time of day were acquired from the Alameda Corridor Transportation Authority and the BNSF Railway. The results are shown in Tables 3.7-8 and 3.7-9. The actual distribution by time period is reasonably close to the uniform distribution shown in Table 3.7-7. Therefore, a uniform distribution of freight train volumes for 2012 was considered to be a reasonable assumption.

Table 3.7-7: Time Periods of the Day, 2012

	Time of Day	No. of Hours	% of 24 Hours (uniform distribution)
A.M. Peak Period	6:00 A.M. to 9:00 A.M.	3	12.5%
M.D.	9:00 A.M. to 3:00 P.M.	6	25.0%
P.M. Peak Period	3:00 P.M. to 7:00 P.M.	4	16.7%
Night	7:00 P.M. to 6:00 A.M.	7	45.8%
Total Daily		**24**	**100.0%**

Table 3.7-8: Alameda Corridor Train Volume by Time of Day

	Time of Day	Average No. of Trains per Period[1]	% of Total Daily
A.M. Peak Period	6:00 A.M. to 9:00 A.M.	5.0	12.9%
M.D.	9:00 A.M. to 3:00 P.M.	8.2	21.3%
P.M. Peak Period	3:00 P.M. to 7:00 P.M.	5.5	14.4%
Night	7:00 P.M. to 6:00 A.M.	19.9	51.5%
Total Daily		**38.6**	**100.0%**

[1] Daily average for last week of each quarter in 2010.

Source: ACTA 2010

Table 3.7-9: BNSF Train Volume at Highgrove in Riverside County by Time of Day

	Time of Day	Average No. of Trains per Period[1]	% of Total Daily
A.M. Peak Period	6:00 A.M. to 9:00 A.M.	10	14.1%
M.D.	9:00 A.M. to 3:00 P.M.	16	22.2%
P.M. Peak Period	3:00 P.M. to 7:00 P.M.	10	14.3%
Night	7:00 P.M. to 6:00 A.M.	35	49.4%
Total		**71**	**100.0%**

[1]Measured over 62 days (July 1 to 31, 2008 and August 1 to 31, 2010)
Source: BNSF 2011

CEQA Baseline Conditions (2012) Roadway Crossing Volumes

For at-grade crossings analysis, CEQA Baseline conditions (2012) traffic volumes were developed using traffic counts and the SCAG RTP. Daily highway traffic was then allocated to four different time periods of the day, based on the hourly factors from the SCAG RTP model and traffic counts as shown in Table 3.7-10.

Table 3.7-10: Hourly Factors Applied to Average Daily Traffic, by County

Period	Time of Day	San Bernardino County	Riverside County	Orange County	Los Angeles County
A.M. Peak (3 hours)	6 A.M.–9 A.M.	0.0687	0.0661	0.0693	0.0686
M.D. (6 hours)	9 A.M.–3 P.M.	0.0450	0.0492	0.0461	0.0462
P.M. Peak (4 hours)	3 P.M.–7 P.M.	0.1054	0.0873	0.0929	0.0945
Night (11 hours)	7 P.M.–6 A.M.	0.0093	0.0143	0.0131	0.0126

CEQA Baseline Conditions (2012) Delay Impacts

Tables 3.7-11 through 3.7-16 list the delay at all crossings for CEQA Baseline conditions (2012). As can be seen, none of the locations experienced an average peak delay greater than 55 seconds.

Table 3.7-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
San Bernardino MP 0.0						
Laurel St.	2	2,260	53.4	107.3	3.4	5.6
Olive St.	2	2,690	53.4	107.3	4.1	5.7
E St.	2	710	53.4	107.3	1.0	5.3
H St.	2	1,420	53.4	107.3	2.1	5.4
Valley Blvd.	2	10,620	53.4	107.3	20.9	8.3
Colton Crossing MP 3.2						
Highgrove Junction MP 6.1 (Connection to Perris via MetroLink)						
Main St.	2	2,580	63.6	132.8	4.9	7.2
Riverside-San Bernardino County Line MP 6.41						
Center St.	4	6,190	63.6	133.1	11.9	7.2
Iowa Ave.	4	22,810	63.6	133.1	55.1	10.0
Palmyrita Ave.	2	3,740	63.6	132.8	7.3	7.3
Chicago Ave.	4	13,510	63.6	133.1	28.5	8.2
Spruce St.	4	7,210	63.6	133.1	14.1	7.3
3rd St.	4	10,860	63.6	133.1	22.1	7.8
Mission Inn (7th St)	4	5,310	63.6	133.1	10.1	7.1
Riverside Yard and Amtrak Station MP 10.02-10.16						
Cridge St.	2	3,750	90.6	152.6	7.9	8.1
West Riverside Junction MP 10.6 (Connection to UP Los Angeles Sub)						
Jane St.	2	2,150	59.6	99.7	2.8	5.0
Mary St.	4	11,890	59.6	100.0	17.2	5.7
Washington St.	2	8,260	59.6	99.7	12.7	6.2
Madison St.	4	15,650	59.6	100.0	23.8	6.1
Jefferson St.	2	8,160	59.6	99.7	12.5	6.1
Adams St.	4	17,440	59.6	100.0	27.2	6.3

Table 3.7-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
Jackson St.	4	7,780	59.6	100.0	10.7	5.3
Gibson St.	2	840	59.6	99.7	1.1	4.8
Harrison St.	2	6,630	59.6	99.7	9.7	5.8
Tyler St.	4	15,560	59.6	100.0	23.6	6.1
Pierce St.	2	11,130	59.6	99.7	18.6	7.0
Buchanan St.	2	9,530	59.6	99.7	15.1	6.5
Magnolia Ave. eastbound	2	8,760	59.6	99.7	13.6	6.3
Magnolia Ave. westbound	2	8,760	59.6	99.7	13.6	6.3
Mckinley St.	4	26,530	59.6	100.0	47.8	7.8
Radio Rd.	2	4,290	59.6	99.7	5.9	5.3
Joy St.	2	7,250	59.6	99.7	10.8	5.9
Sheridan St.	2	2,360	59.6	99.7	3.1	5.0
Cota St.	4	6,010	59.6	100.0	8.1	5.1
Railroad St.	4	9,630	59.6	100.0	13.5	5.5
Smith St.	4	13,630	59.6	100.0	20.2	5.9
Auto Center Dr.	2	11,520	59.6	99.7	19.5	7.1
Riverside-Orange County Line						
Kellogg Dr.	4	6,840	59.6	100.0	9.4	5.2
Lakeview Ave.	3	18,780	59.6	99.8	33.8	7.8
Richfield Rd.	4	9,430	59.6	100.0	13.3	5.5
Atwood Junction MP 40.6 (Connection to Old Olive Sub)						
Van Buren St.	2	6,740	42.5	83.2	8.9	5.2
Jefferson St.	3	6,320	42.5	83.3	7.8	4.7
Tustin Ave. (Rose Dr.)	4	29,050	42.5	83.4	50.3	7.7
Orangethorpe Ave.	4	28,200	42.5	83.4	48.0	7.5
Kraemer Bl.	4	19,700	42.5	83.4	28.8	6.0

Table 3.7-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
Placentia Ave.	4	14,430	42.5	83.4	19.5	5.3
State College Blvd.	4	23,480	42.5	83.4	36.6	6.6
Acacia Ave.	4	6,710	42.5	83.4	8.2	4.6
Raymond Av.	4	20,940	42.5	83.4	31.3	6.2
Fullerton Junction MP 45.5–MP 165.5						
Orange-LA County Line						
Valley View Ave.	4	24,080	85.5	117.9	47.2	8.5
Rosecrans/Marquardt Ave.	4	22,750	85.5	117.9	43.5	8.2
Lakeland Rd.	2	6,410	85.5	117.5	10.3	6.5
Los Nietos Rd.	4	20,070	85.5	117.9	36.5	7.7
Norwalk Blvd.	4	25,720	85.5	117.9	52.0	8.9
Pioneer Blvd.	4	15,010	85.5	117.9	25.2	6.8
Passons Blvd.	4	12,450	85.5	117.9	20.1	6.5
Serapis Ave.	2	6,150	85.5	117.5	9.8	6.4
Commerce Yard MP 148.5						
Hobart Yard MP 146.0						
OVERALL						
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)					1,065.2	
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						7.0

Table 3.7-12: BNSF Cajon Subdivision from San Bernardino to Barstow, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
Barstow MP 0						
Lenwood Rd.	2	4,460	59.9	106.6	5.6	4.7
Hinkley Rd.	2	470	59.9	106.6	0.5	4.1
Indian Trail Rd.	2	540	59.9	106.6	0.6	4.1
Vista Rd.	2	2,750	59.9	106.6	3.3	4.4
Turner Rd.	2	30	59.9	106.6	0.0	4.1
North Bryman Rd.	2	160	59.9	106.6	0.2	4.1
South Bryman Rd.	2	1,920	59.9	106.6	2.3	4.3
Robinson Ranch Rd.	2	120	59.9	106.6	0.1	4.1
1st St.	2	680	59.9	125.8	1.1	5.8
6th St.	4	3,580	59.9	146.1	8.0	8.2
Silverwood Junction MP 56.6						
Keenbrook Junction MP 69.4						
Swarthout Canyon Rd.	2	180	71.9	209.9	0.7	13.4
Devore Rd / Glen Helen Pkwy.	4	6,240	71.9	210.4	24.9	14.7
Dike Junction						
Palm Ave.	2	11,790	53.0	157.7	44.5	15.2
San Bernardino MP 81.4						
OVERALL						
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)					91.9	
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						10.7

Table 3.7-13: UP Alhambra Subdivision from Los Angeles Transportation Center to Colton Crossing, 2012 Baseline (Excluding Segment that Is Combined with UP LA Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
LATC MP 482.9						
San Pablo St.	4	4,010	18.7	92.5	11.7	10.7
Vineburn Ave.	2	1,340	18.7	65.3	1.9	5.2
Worth/Boca Rd.	2	7,760	18.7	65.3	13.6	7.1
Valley Blvd.	4	27,200	18.7	43.8	24.5	3.9
Ramona St.	2	12,580	18.7	65.3	24.4	8.2
Mission Rd.	3	22,780	18.7	65.4	49.0	9.6
Del Mar Ave.	2	20,830	18.7	65.3	59.9	14.6
San Gabriel Blvd.	4	34,720	18.7	65.4	82.7	11.1
Walnut Grove Ave.	3	15,170	18.7	38.3	9.2	2.5
Encinita Ave.	2	6,320	18.7	38.3	3.4	2.1
Lower Azusa Rd.	4	17,210	18.7	38.4	10.0	2.3
Temple City Blvd.	4	20,650	18.7	38.4	12.7	2.5
Baldwin Ave.	4	25,620	18.7	38.4	17.2	2.8
Arden Dr.	4	10,930	18.7	38.4	5.8	2.0
El Monte Junction MP 494.99						
Tyler Ave.	4	11,640	55.5	64.8	8.6	3.1
Cogswell Rd.	2	9,960	55.5	64.5	8.3	3.7
Temple Ave.	4	26,760	55.5	64.8	25.5	4.4
Bassett Junction MP 498.45						
Vineland Ave.	2	12,410	19.5	38.9	8.3	2.8
Puente Ave.	4	31,450	19.5	39.0	24.0	3.4
Orange Ave.	2	5,700	19.5	38.9	3.1	2.1
California Ave.	2	18,560	19.5	38.9	16.2	4.2

Table 3.7-13: UP Alhambra Subdivision from Los Angeles Transportation Center to Colton Crossing, 2012 Baseline (Excluding Segment that Is Combined with UP LA Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
City of Industry Junction MP 501.5						
Fullerton Rd.	4	18,080	24.4	49.4	13.8	3.1
Fairway Dr.	4	19,620	24.4	49.4	15.3	3.2
Lemon Rd.	4	16,990	24.4	49.4	12.8	3.0
Brea Canyon Rd.	2	14,230	24.4	49.3	13.0	4.0
Pomona Junction MP 514.3	HANDLED SEPARATELY DUE TO PROXIMITY TO UP LA SUB					
LA-San Bernardino County Line MP 516.7						
Montclair Junction						
Bon View Ave.	2	9,970	24.7	48.5	7.4	3.0
Vineyard Ave.	4	30,600	24.7	48.7	27.7	4.0
Milliken Ave.	6	34,020	24.7	48.8	26.7	3.3
Kaiser Junction MP 527.5						
West Colton MP 534.7						
Colton Crossing MP 538.70						
OVERALL						
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)					536.8	
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						4.9

Table 3.7-14: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2012 Baseline (Excluding Segment that Is Combined with UP Alhambra Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
East Los Angeles MP 5.85						
S. Vail Ave.	2	7,810	24.0	47.0	7.4	3.9
Maple Ave.	2	5,500	24.0	47.0	4.9	3.5
S. Greenwood Ave.	4	7,200	24.0	47.1	6.1	3.3
Montebello Blvd.	4	20,340	24.0	47.1	20.7	4.3
Durfee Ave.	2	13,810	24.0	33.4	7.6	2.5
Rose Hills Rd.	4	9,350	24.0	32.1	3.5	1.5
Mission Mill Rd.	2	2,160	24.0	32.0	0.8	1.4
Workman Mill	4	7,570	24.0	32.1	2.8	1.5
Turnbull Canyon Rd.	4	14,290	24.0	32.1	5.7	1.7
Stimson Av & Puente Ave.	4	14,570	24.0	32.1	5.8	1.7
Bixby Dr.	2	2,930	24.0	32.0	1.0	1.4
Fullerton Rd.	4	23,980	24.0	32.1	11.2	2.1
Nogales St.	6	37,330	24.0	32.2	17.8	2.2
Fairway Dr.	4	25,090	24.0	32.1	11.9	2.2
Lemon St.	4	14,900	24.0	32.1	6.0	1.7
Pomona Junction MP 31.9	HANDLED SEPARATELY DUE TO PROXIMITY TO UP ALHAMBRA SUB					
LA-San Bernardino County Line MP 33.17						
E. Montclair Junction MP 35.02						
Bonview Ave.	2	3,460	28.6	41.0	1.6	1.9
Grove Ave.	6	39,240	28.6	41.2	25.8	3.0
Vineyard Ave.	4	4,420	28.6	41.1	2.0	1.8
Archibald Ave.	4	5,230	28.6	41.1	2.4	1.8

Table 3.7-14: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2012 Baseline (Excluding Segment that Is Combined with UP Alhambra Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
San Bernardino-Riverside County Line MP 43.36						
Milliken Ave.	6	20,890	28.6	41.2	11.0	2.2
Mira Loma Junction MP 45.7						
Bellegrave Ave.	2	7,680	28.1	40.1	4.0	2.2
Rutile St.	2	8,240	28.1	40.1	4.3	2.2
Clay St.	4	16,250	28.1	40.2	8.6	2.2
Jurupa Ave.	2	14,080	28.1	47.0	12.8	4.1
Mountain View Ave	2	1,710	28.1	47.0	1.1	2.4
Streeter Ave.	4	13,810	28.1	47.2	9.9	2.9
Palm Ave.	2	7,470	28.1	44.3	4.8	2.6
Brockton Ave.	4	13,310	28.1	47.2	9.5	2.9
Riverside Ave.	2	11,450	28.1	47.0	9.4	3.6
Panorama Rd.	2	6,360	28.1	47.0	4.5	2.9
West Riverside Junction MP 56.7						
OVERALL						
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)					224.8	
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						2.5

Table 3.7-15: Combined UP Alhambra and LA Subdivisions in Pomona and Montclair Area, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
Pomona Junction MP 514.3						
Hamilton Blvd.	4	7,910	48.4	82.9	8.5	4.2
Park Ave.	2	5,600	48.4	82.7	6.2	4.4
Main St.	2	1,550	48.4	82.7	1.6	3.8
Palomares St.	2	3,820	48.4	82.7	4.1	4.1
San Antonio Ave.	4	6,810	48.4	82.9	7.2	4.1
LA-San Bernardino County Line MP 516.7						
Monte Vista Ave.	4	12,130	48.4	82.9	13.7	4.5
San Antonio Ave.	4	10,270	48.4	82.9	11.3	4.3
Vine Ave.	2	7,540	48.4	82.7	8.8	4.7
Sultana Ave.	2	11,230	48.4	82.7	14.7	5.6
Campus Ave.	2	10,550	48.4	82.7	13.5	5.4
Montclair Junction						
OVERALL						
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)					89.5	
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						4.7

Table 3.7-16: UP Yuma Subdivision from Colton Crossing to Indio, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
Colton Crossing MP 539.0						
Hunts Lane	4	13,580	40.1	91.1	20.2	5.8
Whittier Ave.	2	190	40.1	107.6	0.3	6.3
Beaumont Ave.	2	460	40.1	107.6	0.8	6.4
San Timoteo Canyon Rd.	2	11,700	40.1	107.6	28.6	10.3
Alessandro Rd.	2	290	40.1	107.6	0.5	6.3
San Bernardino-Riverside County Line MP 549.25						
Live Oak Canyon Rd.	2	1,100	40.1	107.6	2.0	6.5
San Timoteo Canyon Rd.	2	1,430	40.1	107.6	2.6	6.5
Viele Ave.	2	110	40.1	90.9	0.1	4.5
California Ave.	2	6,600	40.1	90.9	9.4	5.5
Pennsylvania Ave.	2	8,180	40.1	90.9	12.1	5.8
North Sunset Ave.	2	3,810	40.1	90.9	5.1	5.0
22nd St.	4	15,470	40.1	91.1	22.8	5.7
San Gorgonio Ave.	2	12,800	40.1	90.9	21.6	7.0
Hargrave St.	2	16,650	40.1	90.9	32.0	8.4
Apache Trail	2	2,530	40.1	90.9	3.3	4.8
Broadway	2	6,670	40.1	90.9	9.5	5.5
Tipton Rd.	2	120	40.1	90.9	0.1	4.5
Garnet MP 588.32						
West Indio MP 609.63						
Indio MP 610.9						
Avenue 52	4	10,980	40.1	91.1	15.4	5.3
Avenue 56/Airport Blvd.	2	4,790	40.1	90.9	6.6	5.2
Avenue 66/4th St.	2	7,840	40.1	90.9	11.5	5.7

Table 3.7-16: UP Yuma Subdivision from Colton Crossing to Indio, 2012 Baseline

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)
OVERALL						
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)					204.6	
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						6.6

3.7.4.2 CEQA Baseline

Section 15125 of the CEQA Guidelines requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. The NOP for the proposed Project was published in April 2013. For purposes of this Draft EIS/EIR, the CEQA baseline takes into account the throughput for the 12-month calendar year preceding NOP publication (January through December 2012) in order to provide a representative characterization of activity levels throughout the complete calendar year preceding release of the NOP. In 2012, the YTI Terminal encompassed approximately 185 acres under its long-term lease, supported 14 cranes (10 operating), and handled approximately 996,109 TEUs and 162 vessel calls. The CEQA baseline conditions are also described in Section 2.7.1 and summarized in Table 2-1.

The CEQA baseline represents the setting at a fixed point in time. The CEQA baseline differs from the No Project Alternative (Alternative 1) in that the No Project Alternative addresses what is likely to happen at the proposed project site over time, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the proposed project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

Additionally, to provide an intelligent understanding of the proposed Project's environmental impacts, a secondary analysis was performed for the proposed Project's Ground Transportation impacts in comparison to a future baseline for the year 2026. The future baseline represents the traffic conditions at the study intersections at the time (or study year, e.g., 2026) the proposed project traffic would affect the intersections. This analysis can be found in Chapter 4, Cumulative Impacts.

3.7.4.3 NEPA Baseline

For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the NEPA baseline. The NEPA baseline conditions are described in Section 2.7.2 and summarized in Table 2-1. The NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a USACE permit.

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a "flat" or "no-growth" scenario. Instead, the NEPA baseline is dynamic and includes increases in operations for each study year (2015, 2016, 2017, 2020, and 2026), which are projected to occur absent a federal permit. Federal permit decisions focus on direct impacts of the proposed Project to the aquatic environment, as well as indirect and cumulative impacts in the uplands determined to be within the scope of federal control and responsibility. Significance of the proposed Project or the alternatives under NEPA is defined by comparing the proposed Project or the alternatives to the NEPA baseline.

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative. Under the No Federal Action Alternative (Alternative 2), no dredging, dredged material disposal, in-water pile installation, or crane installation/extension would occur. Expansion of the TICTF and extension of the crane rail would also not occur. The No Federal Action Alternative includes only backlands improvements consisting of slurry sealing, deep cold planing, asphalt concrete overlay, restriping, and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. These activities do not change the physical or operational capacity of the existing terminal.

The NEPA baseline assumes that by 2026 the terminal would handle up to approximately 1,692,000 TEUs annually, accommodate 206 annual ships calls at two berths, and be occupied by 14 cranes (10 operating). Because the NEPA baseline is dynamic, it includes different levels of terminal operations at each study year (2015, 2016, 2017, 2020, and 2026). Forecast increases in cargo throughput and annual ship calls would still occur as container growth occurs.

3.7.4.4 Study Years

Throughout this document, several study years are analyzed for impacts (2015, 2016, 2017, 2020, and 2026). However, for the purposes of the traffic analysis, only the horizon year of 2026 is presented. This is because 2026 represents the study year with the highest throughput for the proposed Project and all alternatives. When combined with the cumulative traffic growth, this yields the worst-case scenario for the traffic impact assessment, given the specific criteria used. The results of the 2026 analyses indicate no significant impacts. Therefore, it logically follows that none of the earlier study years would have significant impacts; they all have lower throughput, and the analysis of ground transportation impacts is directly related to the throughput and overall traffic volumes.

3.7.4.5 Analysis Assumptions: Background Ambient (not Proposed Project-related) Traffic Growth

Regional background (ambient) traffic growth for NEPA analysis (and the secondary cumulative CEQA impact analysis in Chapter 4) was estimated using data from the Port Area Travel Demand Model (described in Section 3.7.4.1), which includes cumulative proposed project traffic growth. Background traffic growth occurs as a result of regional growth in employment, population, schools, and other activities. To determine the appropriate growth rates, the growth in non-port trips was determined using data from the SCAG regional model. It should be noted that most of the related projects are covered by the growth forecasts of the Port Area Travel Demand Model. Other local projects are not included in the SCAG Regional Travel Demand Forecasting Model and were therefore separately accounted for in the Port Area Travel Demand Model. Although not in the SCAG regional model, the San Pedro Waterfront Project was added to the Port Area Travel Demand Model. All Ports of Long Beach and Los Angeles-projected container and non-container terminal traffic growth are included in the Port Area Travel Demand Model.

The background future intersection traffic volumes (which account for cumulative non-proposed project growth) are developed based on SCAG socioeconomic projections for the years 2012 and 2026 with amendments as reflected in the Port Area Travel Demand Model.

The background future freeway traffic volumes along I-110, I-405, I-710, and SR-91 were obtained from the Port Area Travel Demand Model.

Ports of Los Angeles and Long Beach Trip Generation

Trip generation by the Ports of Los Angeles and Long Beach for the years 2015, 2016, 2017, 2020, and 2026 were estimated by adding traffic resulting from the terminal expansion and associated throughput growth. The 2009 San Pedro Bay Cargo Forecast was used to determine the total port throughput for each future analysis year. Port-related trip generation was developed using the LAHD's "QuickTrip" truck generation model. Port-related trip generation is separated into four classes of vehicles:

- bobtails: tractor-only;
- chassis: tractor plus chassis;
- container: tractor and chassis with loaded or empty container; and
- auto: employee automobile and other auto visitor trips.

Each of the analysis years was defined by changing operating parameters as follows: modified weekend activity; expanded terminal operating hours; increased on-dock rail use; and increased dual transactions within the terminal. These operating parameters affect the amount of truck traffic generated by the terminals to their estimated maximum capacity. Cargo volume (throughput) would increase over the years, and terminals would also change their operations to accommodate the increase in containers. Accordingly, these operational changes are already being put into place. It should be noted that increased throughput does not directly translate into a proportional increase in truck trips due to the different terminal operating parameters over the years. For example, truck trips could actually decrease at certain terminals in the future due to the implementation and expansion of on-dock rail, even with greater throughput. This is because the increase in on-dock capacity is even greater than the increase in throughput, thus resulting in fewer truck trips but more containers processed through the terminal.

The following section summarizes some of the key operating parameters used in the trip generation estimate. These operating parameters are derived from and consistent with the parameters developed and applied in the *Port of Los Angeles Baseline Transportation Study* (POLA 2004) and the *Port of Los Angeles Roadway Study*.

Work shifts. To achieve the forecasted TEU throughput volumes, the Port's terminals must handle more cargo during the non-peak hours than they do currently. The QuickTrip model can generate trips for one, two, or three shifts. For the proposed Project, the terminal operator has indicated they can handle the projected daily container movements via truck (imports, exports, empties, and bare chassis) with the Day Shift (8 A.M. to 5 P.M.) and Second/Night Shift (5 P.M. to 3 A.M.). The Hoot Shift (3 A.M. to 7 A.M.) is only needed for vessel unloading/loading. The railyard is also operated with the day and night shifts only for loading/unloading, with switching done by PHL and the railroads through the entire day.

Non-Cargo Trip Generation. Non-cargo trips (employee, visitor, delivery/vendor trips) were determined based upon data from by LAHD.

TEU Throughput Growth. Port TEU throughput is from the *2009 San Pedro Bay Cargo Forecast* of overall port-wide growth based on estimates of terminal capacity and demand as discussed in Chapters 1 and 2 (The Tioga Group, Inc. and IHD Global Insight 2009).

On-Dock Rail Usage. On-dock rail refers to a rail terminal within or adjacent to the terminal used to build trains to take containers to and from the terminal via rail. Those containers therefore do not travel by truck; they enter or leave the terminal on rail cars. As the percentage of containers moved via on-dock rail is increased, the percentage of containers moved by truck decreases. Building and operating on-dock rail facilities are key methods for reducing truck trips to and from the container terminal. It is expected that the use of on-dock rail will increase throughout the Port over time for many reasons, including the construction of expanded on-dock rail facilities, improvements and enhancements to new and existing on-dock rail facilities, improvements in rail operation technologies, increased demand for rail movements as opposed to truck movements, improved container management procedures, and other factors. The amount of cargo throughput that can be handled by on-dock rail is based on the capacity of the on-dock rail facility, which includes the overall size of the on-dock railyard, the number of linear feet of rail track in the facility, the number and type of equipment servicing the railyard, the physical layout of the railyard, how it interacts with the rest of the terminal, and other design and operational factors. These factors determine the number of trains that can be built within given time periods, the size of the trains, and the overall level of terminal throughput that can be carried in and out of the terminal on rail cars.

Weekend Terminal Operations. Based upon detailed terminal capacity analyses that evaluate terminal and gate congestion, historical weekend gate move data, and a reasonably conservative analysis, weekend throughput is assumed to be 15% of the total weekly throughput.

Peak hour Port-related truck trips do not increase proportionately with TEU growth. This is because, in future years, on-dock rail usage would increase and work shift splits would change as described above. Both of these actions would shift more activity to the second shift and away from the day shift. Therefore, although total trips would increase between the Baseline and Port build-out, some of the increase would occur during off-peak time periods due to the operating parameters described above.

According to the 2009 San Pedro Bay Cargo Forecast, most Port cargo terminals would reach capacity by approximately 2035 even with assumed terminal improvements (see Section 1.2.3.1).

Proposed Project-Related Trip Generation and Distribution

QuickTrip

Forecast proposed Project/alternative-related trip generation includes trips generated by the proposed Project and alternatives. Traffic growth related to the proposed Project and alternatives was developed using the “QuickTrip” truck generation model. QuickTrip is a spreadsheet truck trip generation model that was developed for the *Ports of Long Beach and Los Angeles Transportation Study* (POLB and POLA 2001). QuickTrip estimates terminal truck flows by hour of the day based on TEU throughput and using assumed terminal operating parameters. The QuickTrip model was run and tested against the gate data (gate counts and historical gate data from the terminals). These data (TEU per container ratio, monthly TEU throughput, mode split, hours of operation, dual move percentage, worker shift splits, and peaking factors) were input into QuickTrip for each terminal. QuickTrip was validated by comparing estimates of gate activity to actual gate counts conducted in the field. The results of the validation exercise indicate that the QuickTrip model is able to estimate truck movements by day and peak hour within 2% to 10% of actual counts for all terminals (both directions combined), depending on which peak hour is modeled.

The Port throughput provides the "demand" for the proposed Project; therefore, the daily and hourly loaded container truck trips to/from the proposed Project/alternatives were determined using QuickTrip.

Throughput projections for the Port Complex are discussed in Sections 1.2.3.1 in Chapter 1, Introduction, and 2.2.2.1 in Chapter 2, Project Description. The proposed Project/Alternative-related TEU throughput is shown in the following table.

Alternative	Annual TEUs (2026)
Proposed Project	1,913,000
Alternative 1 – No Project	1,692,000
Alternative 2 – No Federal Action	1,692,000
Alternative 3 – Reduced Project: –Improve Berths 217–220 Only	1,913,000

It can be observed from the table that the proposed Project and Alternative 3 would have the same annual terminal throughput of 1,913,000 TEUs in 2026, and Alternative 1 and Alternative 2 would have the same annual terminal throughput of 1,692,000 TEUs. Since the trip generation of the terminal is dependent on TEU throughput and terminal operating parameters, the proposed Project and Alternative 3 would result in the same trip generation; consequently, traffic conditions for these two scenarios would operationally be the same. Similarly, Alternatives 1 and 2 are also operationally the same, as they represent the existing capacity of the terminal (1,692,000 TEUs). 1,692,000 TEUs also represents the NEPA baseline in 2026.

Proposed Project Construction-Related Trip Generation and Distribution

Construction of the proposed Project would include improvements to Berths 214–216 and 217–220 that would involve dredging to increase the depth of the berths and installing sheet and/or king piles. Additional improvements at the terminal would include extending the 100-foot gauge crane rail, expanding the Terminal Island Container Transfer Facility (TICTF) on-dock rail by adding a single operational rail track, relocation of two Port-owned cranes, relocation and realignment of two YTI cranes, delivery and installation of up to four new cranes, raising and extending up to six YTI cranes, and backland surface improvements.

The proposed Project would be constructed in two phases; Phase I is expected to take approximately 12 months beginning in mid-2015, and Phase II is expected to take approximately 10 months beginning in mid-2016. During Phase I of construction, Berths 212–213 and Berths 214–216 would remain in operation. During Phase II of construction, Berths 212–213 and the newly improved Berths 217–220 would be in operation.

Intersection capacity impacts are typically evaluated for permanent traffic increases after project completion. The total number of construction-related trips would vary during construction of the proposed Project. It is anticipated that the majority of construction materials (i.e., aggregate, concrete, asphalt, sand, and slurry) would be provided by local suppliers and stored at the contractors' existing facilities. The majority of construction materials would be imported during off-peak traffic hours (the main exception being cement trucks, which have a limited window for delivery times). Construction haul routes would be via the I-110 to SR-47 across the Vincent Thomas Bridge or via the I-710 to Ocean Boulevard across the Gerald Desmond Bridge to Pier S Avenue/New Dock Street via Seaside Avenue/Ocean Boulevard. Workers would be required to arrive at the construction site prior to the A.M. peak period and depart prior to the P.M. peak period. Therefore, trip generation for construction activities has not been provided, and traffic impacts during construction have not been analyzed.

Proposed Project Operational Trip Generation and Distribution

Trip generation for the proposed Project and alternatives and analysis years was derived by determining the projected TEU forecast provided by LAHD to the expected capacity of the YTI Terminal in each scenario.

It should be noted that increased throughput does not directly translate into proportionally increased truck trips due to the different hourly terminal operating parameters and changes to the amount of containers moved by on-dock intermodal rail over the years.

Trip distribution was based on data from the Port Area Travel Demand Model, which is based on truck driver origin/destination surveys (actual surveys of truck drivers at the gates), as well as from Longshore Worker place of residence data.

Proposed Project-Area Transportation Improvements

There are a number of transportation projects planned to be implemented in the Port area during the period of the proposed Project and alternatives. These projects are either included in the regional transportation planning and programming documents and the SCAG RTP and Regional Transportation Improvement Program, or were developed as part of Port Planning and implementation efforts, including the *Port of Los Angeles Roadway Transportation Study* (POLA 2004). Several of the transportation projects contained in the study have been reviewed by Caltrans. Caltrans is the agency that owns, operates, and controls many of these transportation facilities. Therefore, implementation of any improvements at those locations must be approved by Caltrans before they can proceed. A major project development milestone is called the Project Study Report (PSR), which outlines the need for a project, describes the project components, analyzes the project, and assesses alternatives. After approval of the PSR, a project is considered to be approved by Caltrans for purposes of proceeding to the development of geometric plans, right-of-way maps, environmental studies, and construction. All of the noted projects have been taken through the PSR process, and the PSR documents were approved by Caltrans. Additionally, funds have been designated for these projects. The remaining steps to implementation of the projects include engineering plan preparation, environmental documentation, funding, and construction. Because these projects were approved by Caltrans through the PSR process, have been or are planned to be environmentally cleared via appropriate environmental documents, and have committed funding, they are reasonably foreseeable projects and are therefore included in the EIS/EIR transportation analysis as related projects and assumed to be in place during the proposed Project's/alternatives' build-out years for NEPA analysis and the cumulative analysis for ground transportation in Chapter 4, Cumulative Impacts. This document's CEQA analysis, by contrast, does not assume that these planned transportation improvements will be in place during the proposed Project's build-out years, as they are not part of the baseline.

The related transportation projects include:

Sepulveda Boulevard Widening: This project consists of the widening of Sepulveda Boulevard from Alameda Street to the east Carson City limits from two lanes to four lanes. The project will widen Sepulveda Boulevard near the current entrance/exit of the ICTF site and the exit of the proposed ICTF Modernization project, which is used for ICTF access to/from Alameda Street. The project lead agency is the City of Carson, and the horizon year for completion is 2014.

Wilmington Avenue/223rd Street Interchange Improvements: Construction will consist of: (1) an additional traffic lane on Wilmington Avenue northbound from 223rd Street to the existing I-405 northbound off-ramp; (2) construction of a new two-lane I-405 on-ramp from southbound Wilmington Avenue; (3) construction of an additional lane to the existing two-lane I-405 southbound on-ramp from Wilmington Avenue; and (4) construction of an additional lane to the existing two-lane I-405 southbound off-ramp to Wilmington Avenue. The project lead agency is the City of Carson, and the horizon year for completion is 2014.

Navy Way/Seaside Avenue Interchange: Construction consists of a new flyover connector from northbound Navy Way to Westbound Seaside Avenue. The improvement is assumed to be completed by year 2020 and to eliminate the need for a traffic signal at this location. The flyover improvement provides direct ramp connections for existing left-turn movements, thereby eliminating conflicts between left-turn and through traffic that normally occurs at a traditional intersection.

Wilmington ATSAC/ATCS Project: Improvements to 70 signalized intersections within the Wilmington city limits are being undertaken through implementation of computer-based, real-time traffic signal monitoring and control systems. Developed in 1995, the Adaptive Traffic Control System (ATCS) is the latest enhancement to the Automated Traffic Surveillance and Control (ATSAC) system and uses a personal computer-based traffic signal control software program that provides fully adaptive traffic signal control based on real-time traffic conditions. The ATCS will automatically adjust traffic signal timing in response to current traffic demands. Although ATCS implementation will not increase the capacity of the roadway, review of prior before-and-after studies conducted demonstrates that implementation of the ATSAC and ATCS projects would provide congestion relief by improving travel times, travel speeds, and traffic progression and by reducing delay time at intersections. Based on these improvements in travel speeds, progression, and delay, LADOT has determined that the ATCS retrofit is equivalent to improving the V/C ratio by at least 7% to 10%.

The ATCS allows for an automatic-adjustment-to-traffic signal timing strategy and control pattern in response to current traffic demands by controlling all three critical components of traffic signal timing simultaneously: cycle length, phase split, and offset. In this analysis of future operating conditions for the proposed Project and alternatives, a capacity increase of 10% (0.10 V/C adjustment) was applied to reflect the benefits of ATSAC/ATCS control at all signalized study intersections, as approved by LADOT. Of the 15 analysis intersections, the study intersection of Anaheim Street/Alameda Street is currently operating under the ATSAC system. Horizon year for ATSAC/ATCS implementation is year 2014.

For the purposes of this analysis, all study intersections within the City of Los Angeles, the project lead agency, are assumed to be operating with the ATSAC/ATCS system by the future year 2015 scenario.

Gerald Desmond Bridge Replacement Project: The Port of Long Beach, in cooperation with Caltrans, will be replacing the existing Gerald Desmond Bridge, which connects SR-710 to Terminal Island, in the City of Long Beach. The Gerald Desmond Bridge Replacement Project will improve existing traffic flows across the bridge, replace the physically deteriorated existing structure, and increase the vertical clearance beneath the bridge for the shipping traffic that passes below. In terms of capacity, the bridge will be expanded to include six travel lanes plus full standard shoulders, in comparison to the existing bridge, which has three lanes on the ascending portions of the bridge and two lanes on the descending portions and has limited shoulders. The new bridge and Ocean Boulevard will be the westerly extension of SR-710 to SR-47 (Terminal Island Freeway). It is assumed to be complete by the future year 2020 scenario (the bridge is planned to be completed in 2016).

The following major planned regional improvements are not included as part of the cumulative analysis; however, their construction would alter the regional roadway capacity near the Port by affecting roadways utilized by both cumulative background trips and proposed Project trips.

I-710 (Long Beach Freeway) Corridor Project: LAHD is collaborating with Caltrans, SCAG, Metro, Gateway Cities Council of Governments, and the Port of Long Beach on the I-710 Corridor Project. The Port is a funding and technical partner to Caltrans and Metro for the Project Approval/Environmental Documentation phase. The recently released Draft EIR/EIS identifies improvements to the entire 20-mile corridor to accommodate all year 2035 Port/Port of Long Beach and regional traffic. The corridor area includes the mainline freeway and adjacent arterial street system. The proposed improvements include: a separate truckway with zero emission technology; additional lanes on the mainline in various locations; improved/reconstructed freeway-freeway and arterial street interchanges; and extensive arterial street/intersection improvements throughout the entire corridor area.

The Schuyler Heim Bridge Replacement: The Schuyler Heim Bridge Replacement is currently under construction, by Caltrans. This project is merely a replacement, and will not add additional lanes to the existing six-lane bridge.

SR-47 Expressway: This proposed ACTA project consists of a new, four-lane elevated roadway connecting the new Schuyler Heim Bridge on the south end with Alameda Street on the north end, just south of PCH. This new viaduct would provide a bypass of three signalized intersections and five at-grade railroad crossings along Henry Ford Avenue and Alameda Street between Pier A Way and PCH. This planned ACTA project is presently awaiting the resolution of environmental litigation, which has caused the postponement of final design. Moreover, due to the decline in cargo volumes and corresponding revenue, this project is unfunded at this time.

3.7.4.6 Thresholds of Significance

A project in the Harbor is considered to have a significant transportation/circulation impact if the project would result in one or more of the following occurrences. These criteria were excerpted from the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) and other criteria applied to Port projects, and are used as the basis for determining the impacts of the proposed Project and alternatives under CEQA and NEPA, except as noted for NEPA.

TRANS-1: Would proposed project/alternative construction result in a short-term, temporary increase in truck and auto traffic?

TRANS-2: Would the long-term vehicular traffic associated with the proposed Project/alternative significantly impact at least one study location's volume/capacity ratios or level of service?

For intersections in the Cities of Carson and Long Beach, proposed project operations would have a significant impact under CEQA or NEPA on transportation/circulation if it increases an intersection's V/C ratio in accordance with the following guideline:

- V/C ratio of 0.02 or greater if the final LOS is E or F.

In the City of Los Angeles, proposed project operations would have a significant impact under CEQA or NEPA on transportation/circulation if it increases an intersection's V/C ratio in accordance with the following guidelines:

- V/C ratio increase greater than or equal to 0.04 if final LOS is C;
- V/C ratio increase greater than or equal to 0.02 if final LOS is D; or
- V/C ratio increase greater than or equal to 0.01 if final LOS is E or F.

TRANS-3: Would an increase in on-site employees due to proposed project/alternative operations result in a significant increase in related public transit use?

The proposed Project would have an impact on local transit services if it would increase demand beyond the supply of such services anticipated at proposed project build-out.

TRANS-4: Would proposed project/alternative operations result in increases considered significant related to freeway congestion?

According to the CMP Traffic Impact Analysis Guidelines, an increase of 0.02 or more in the demand-to-capacity (D/C) ratio with a resulting LOS F at a CMP freeway monitoring station is deemed a significant impact (Metro 2010). This applies only if a project meets the minimum CMP thresholds for including the location in the analysis, which are 50 trips at a CMP intersection and 150 trips on a freeway segment. At non-CMP freeway segments, an increase of 0.02 or more in the D/C ratio with a resulting LOS F at a CMP freeway monitoring station is deemed a significant impact.

TRANS-5: Would the proposed Project/alternative cause an increase in rail activity and/or delays in regional traffic?

The proposed Project is considered to have a significant impact under CEQA at the affected at-grade crossings if the average vehicle delay in the peak hour caused by the proposed Project would exceed the levels shown in Table 3.7-17. If the LOS at the crossing is A through D, then the impact is considered insignificant. If, with the proposed Project, the crossing is at LOS E (55 to 80 seconds of average vehicle delay), and the change in delay is 2 seconds or more, then the impact is considered significant. If the crossing is at LOS F (over 80 seconds of average vehicle delay), and the change in average delay is 1 second or more, then the impact is considered significant.

As noted below, because there are no at-grade crossings between the proposed project site and the greater Los Angeles intermodal railyards (i.e., BNSF's Hobart yard, UP's ELA), there are no rail-related at-grade impacts in this area, and such impacts beyond these railyard locations are outside of the NEPA/federal scope of analysis and are therefore not evaluated under NEPA.

LAHD is using the thresholds of significance shown in Table 3.7-17 to evaluate the significance of vehicle delay impacts at at-grade crossings consistent with the rail methodology.

Table 3.7-17: Thresholds of Significance for At-Grade Crossings

Level of Service (LOS) with Proposed Project	Change in Average Delay per Vehicle in the Peak Hour
A–D	Not Significant
E (55–80 seconds of average delay per vehicle)	2 seconds
F (over 80 seconds of average delay per vehicle)	1 second

TRANS-6: Would the proposed Project/alternative result in inadequate emergency access?

The proposed Project would have an impact on emergency access if it would result in the closure of roadways or otherwise prevent emergency services from accessing the site in the event of a medical or law enforcement emergency or disaster.

The following criteria were dismissed in the NOP, and are not analyzed as part of this EIS/EIR:

- *Would the project substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

  This criterion was dismissed because the proposed Project would not include modification of any roadways or access roads to or within the terminal. Furthermore, the proposed Project does not include any design features that would be incompatible with the current zoning or land use designation.

- *Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?*

  This criterion was dismissed because the proposed project does not include any modifications to existing roadways on Terminal Island that support current or future bike lanes or bus stops. The proposed Project itself would not include visitor-serving uses that would benefit from alternative modes of transportation. The proposed Project is therefore expected to have no impact on alternative transportation policies or facilities.

3.7.4.7 Impact Determination

Proposed Project

Impact TRANS-1: Proposed project construction would not result in a significant short-term, temporary increase in truck and auto traffic.

The proposed Project would be constructed between 2015 and 2017. As previously stated, the total number of construction-related trips would vary during construction of the proposed Project. It is anticipated that the majority of construction materials (i.e., aggregate, concrete, asphalt, sand, and slurry) would be provided by local suppliers and stored at the contractors' existing facilities. The majority of construction materials would be imported during off-peak traffic hours (the main exception being cement trucks, which have a limited window for delivery times). Construction haul routes would be via the I-110 to SR-47 across the Vincent Thomas Bridge or via the I-710 to Ocean Boulevard across the Gerald Desmond Bridge to Pier S Avenue/New Dock Street via Seaside Avenue/Ocean Boulevard. Workers would be required to arrive at the construction site prior to the A.M. peak period and depart prior to the P.M. peak period. Therefore, quantitative traffic impacts during construction have not been analyzed.

Construction activities could result in temporary increases in traffic volumes and roadway disruptions in the vicinity of a construction site. Potential construction effects from the proposed Project on roadway operations include the following:

- temporary increases in traffic associated with construction worker commutes, delivery of construction materials, hauling of demolished and/or excavated materials, and general deliveries would increase travel demand on roadways; and

- heavy and slow-moving construction vehicles would mix with general-purpose vehicular and non-motorized traffic in the area.

As a standard practice, LAHD requires contractors to prepare a detailed traffic management plan for Port projects, which includes the following: detour plans, coordination with emergency services and transit providers, coordination with adjacent property owners and tenants, advanced notification of temporary bus stop loss and/or bus line relocation, identification of temporary alternative bus routes, advanced notice of temporary parking loss, identification of temporary parking replacement or alternative adjacent parking within a reasonable walking distance, use of designated haul routes, use of truck staging areas, observance of hours of operation restrictions, and appropriate signage for construction activities. The traffic management plan would be submitted to LAHD for approval before construction begins.

CEQA Impact Determination

Given that most of the traffic associated with construction would occur outside of the peak periods, and that a detailed traffic management plan would be prepared and implemented, the proposed Project would not result in a significant short-term, temporary increase in truck and auto traffic.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Given that most of the traffic associated with construction would occur outside of the peak periods, and that a detailed traffic management plan would be prepared and implemented, the proposed Project would not result in a significant short-term, temporary increase in truck and auto traffic.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact TRANS-2: Long-term vehicular traffic associated with the proposed Project would not significantly impact volume/capacity ratio or level of service.

Traffic conditions with the proposed Project were compared to the applicable baseline to determine the proposed Project's incremental impacts, and then the incremental impacts were assessed using the significance criteria described in Section 3.7.4.5.

CEQA Impact Determination

Traffic conditions with the proposed Project were estimated by adding traffic resulting from the improved and enhanced container terminal operations and associated throughput growth to the CEQA baseline. Table 3.7-18 summarizes the trip generation assumptions for the CEQA baseline and the proposed Project. Traffic generated by the proposed Project was estimated to determine potential impacts of the proposed Project on study area roadways.

Table 3.7-18: Trip Generation Analysis Assumptions and Input Data for Berths 212–224

Time Period	Vehicle Type	2012 CEQA Baseline Conditions			2026 No Project Conditions			2026 With Project Conditions		
		In	Out	Total	In	Out	Total	In	Out	Total
A.M. Peak Hour	Auto	28	11	39	131	44	175	147	49	196
	Bob-tail	49	54	103	84	81	165	93	90	183
	Other trucks	77	66	143	172	163	335	190	180	370
	PCEs	**236**	**202**	**438**	**567**	**459**	**1,026**	**629**	**507**	**1,136**
M.D. Peak Hour	Auto	11	24	35	39	46	85	43	52	95
	Bob-tail	33	60	93	61	60	121	68	67	135
	Other trucks	94	109	203	126	120	246	138	132	270
	PCEs	**235**	**308**	**543**	**358**	**353**	**711**	**395**	**390**	**785**
P.M. Peak Hour	Auto	83	118	201	84	203	287	94	228	322
	Bob-tail	30	33	63	31	37	68	34	41	75
	Other trucks	37	74	111	63	72	135	69	79	148
	PCEs	**190**	**302**	**492**	**242**	**387**	**629**	**269**	**431**	**700**

The net increase in truck trip generation would include the increased percentage of cargo moved via the expanded on-dock rail facilities. Appendix D contains all of the CEQA baseline, NEPA baseline, and with-proposed Project traffic forecasts and LOS calculation worksheets.

Table 3.7-19 compares the proposed project operating conditions at each study intersection relative to baseline conditions, and identifies impacts using the significance criteria described in Section 3.7.4.5.

Based on the results of the traffic study as presented in Table 3.7-19 and the worksheets set forth in Appendix D, the proposed Project would not result in significant circulation system impacts relative to CEQA baseline conditions at any of the study locations.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Traffic conditions with the proposed Project for the years 2012 and 2026 were estimated by adding traffic resulting from the expanded container terminal and associated throughput growth to the NEPA baseline. The evaluation assumptions described in Section 3.7.4.5 apply.

Table 3.7-18 summarizes the trip generation for the NEPA baseline (2026 No Project) and 2026 With proposed Project. Table 3.7-20 summarizes the NEPA baseline and proposed Project intersection operating conditions for the year 2026.

The proposed Project would not result in significant impacts under NEPA based on the significance criteria described in Section 3.7.4.5.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact TRANS-3: An increase in on-site employees due to proposed project operations would not significantly increase public transit use.

Although the proposed Project would result in additional on-site employees, the increase in use of public transit for work-related trips would be negligible. Intermodal facilities generate extremely low transit demand for several reasons. The primary reason that proposed project workers generally would not use public transit is their work shift schedule. Most workers prefer to use a personal automobile to facilitate timely commuting. Also, Port workers' incomes are generally higher than similarly skilled jobs in other areas, and higher incomes correlate to lower transit usage. In addition, parking at the Port is readily available and free for employees, which encourages workers to drive to work. Finally, although there are 12 existing transit routes that serve the general area surrounding the proposed project site, none of the existing routes stop within one mile of the proposed project site.

CEQA Impact Determination

Based on the analysis above, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The proposed Project would result in a higher employment level compared to the NEPA baseline due to increased throughput operations, but for the same reasons as discussed under the CEQA impacts discussion, the increase in public transit usage for work-related trips would be negligible. Less than significant impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Table 3.7-19: Intersection Level of Service Analysis—CEQA Baseline Compared to 2026 with Proposed Project

		2012 CEQA Baseline						2026 With Proposed Project						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak							
#	Study Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	A	0.399	A	0.439	A	0.533	A	0.423	A	0.443	A	0.534	0.024	0.004	0.001	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	A	0.586	A	0.492	B	0.644	A	0.587	A	0.492	B	0.644	0.001	0.000	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.402	A	0.407	A	0.453	A	0.409	A	0.409	A	0.455	0.007	0.002	0.002	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [2]	A	0.270	A	0.280	A	0.382	A	0.293	A	0.283	A	0.385	0.023	0.003	0.003	No	No	No
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.395	A	0.356	A	0.454	A	0.395	A	0.356	A	0.454	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [2]	A	0.061	A	0.175	A	0.223	A	0.099	A	0.181	A	0.226	0.038	0.006	0.003	No	No	No
7	Henry Ford Avenue / Anaheim Street [2]	A	0.296	A	0.423	A	0.544	A	0.342	A	0.428	A	0.552	0.046	0.005	0.008	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	A	0.080	A	0.141	A	0.173	A	0.141	A	0.163	A	0.184	0.061	0.022	0.011	No	No	No
9	Navy Way / Seaside Avenue [2]	A	0.387	A	0.332	A	0.575	A	0.404	A	0.337	A	0.578	0.017	0.005	0.003	No	No	No
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.457	A	0.495	B	0.631	A	0.465	A	0.496	B	0.631	0.008	0.001	0.000	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	B	10.5	A	9.1	B	10.0	B	14.6	A	9.4	B	10.5	4.1	0.3	0.5	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	A	7.0	A	7.3	A	7.6	A	7.6	A	7.4	A	7.8	0.6	0.1	0.2	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard Westbound [3]	A	0.305	A	0.369	A	0.349	A	0.327	A	0.381	A	0.354	0.022	0.012	0.005	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard Eastbound [3]	A	0.246	A	0.358	A	0.375	A	0.246	A	0.358	A	0.375	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [3]	A	0.309	A	0.387	A	0.362	A	0.412	A	0.424	A	0.394	0.103	0.037	0.032	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [3]	A	0.284	A	0.315	A	0.346	A	0.334	A	0.319	A	0.378	0.050	0.004	0.032	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [3]	A	0.236	A	0.358	A	0.355	A	0.257	A	0.363	A	0.359	0.021	0.005	0.004	No	No	No

Notes:
[1] City of Carson intersection analyzed using ICU methodology according to City standards.
[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[4] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

Table 3.7-20: Intersection Level of Service Analysis—2026 NEPA Baseline Compared to 2026 with Proposed Project

		2026 NEPA Baseline						2026 With Proposed Project						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak							
#	Study Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	D	0.848	B	0.604	B	0.673	D	0.850	B	0.606	B	0.674	0.002	0.002	0.001	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	C	0.735	A	0.525	C	0.720	C	0.738	A	0.526	C	0.720	0.003	0.001	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.580	A	0.570	A	0.462	A	0.582	A	0.571	A	0.462	0.002	0.001	0.000	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [2]	C	0.711	A	0.518	A	0.576	C	0.715	A	0.520	A	0.577	0.004	0.002	0.001	No	No	No
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.473	A	0.466	A	0.551	A	0.473	A	0.466	A	0.551	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [2]	C	0.793	A	0.430	A	0.447	C	0.799	A	0.433	A	0.449	0.006	0.003	0.002	No	No	No
7	Henry Ford Avenue / Anaheim Street [2]	F	1.071	D	0.844	D	0.819	F	1.080	D	0.849	D	0.822	0.009	0.005	0.003	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	B	0.675	A	0.429	A	0.471	B	0.684	A	0.433	A	0.475	0.009	0.004	0.004	No	No	No
9	Navy Way / Seaside Avenue [2]	N/A																	
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.526	A	0.470	B	0.694	A	0.527	A	0.471	B	0.696	0.001	0.001	0.002	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	C	20.7	B	11.6	B	13.4	C	22.8	B	11.7	B	13.8	2.1	0.1	0.4	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	C	15.2	B	11.0	B	12.3	C	17.6	B	11.2	B	12.6	2.4	0.2	0.3	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [3]	D	0.831	B	0.683	B	0.680	D	0.834	B	0.685	B	0.680	0.003	0.002	0.000	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [3]	F	1.058	D	0.820	C	0.774	F	1.058	D	0.820	C	0.774	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [3]	B	0.602	A	0.531	A	0.557	B	0.619	A	0.538	A	0.569	0.017	0.007	0.012	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [3]	D	0.816	B	0.636	C	0.716	D	0.824	B	0.643	C	0.725	0.008	0.007	0.009	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [3]	B	0.607	A	0.504	A	0.593	B	0.610	A	0.506	A	0.595	0.003	0.002	0.002	No	No	No

Notes:

[1] City of Carson intersection analyzed using ICU methodology according to City standards.

[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.

[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.

[4] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

Impact TRANS-4: Proposed project operations would not significantly increase freeway congestion.

A traffic impact analysis is required at the following locations, according to the CMP, TIA Guidelines (Metro 2010):

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the proposed Project would add 50 or more trips during either the A.M. or P.M. weekday peak hours. The three CMP arterial monitoring stations are:
    - PCH/Santa Fe Avenue (not a study intersection—less than 50 peak hour trips added by the proposed Project);
    - Alameda Street/ PCH (study intersection #5); and
    - PCH/Figueroa Street (not a study intersection—less than 50 peak hour trips added by the proposed Project).
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the A.M. or P.M. weekday peak hours. The CMP freeway monitoring stations expected to be affected by the proposed Project are in the following locations:
    - I-405 at Santa Fe Avenue (CMP Station 1066);
    - SR-91 east of Alameda Street and Santa Fe Avenue (CMP Station 1033);
    - I-710 between I-405 and Del Amo Boulevard (CMP Station 1079);
    - I-710 north of I-105, north of Firestone Boulevard (CMP Station 1080);
    - I-710 between PCH and Willow Street (CMP Station 1078); and
    - I-110 south of “C” Street (CMP Station 1045).

Additional freeway segments were also evaluated to assess the increases in traffic congestion.

CEQA Impact Determination

The proposed Project would result in additional truck trips on the surrounding freeway system. Tables 3.7-21 and 3.7-22 summarize the change to freeway monitoring locations as well as the additional freeway segments due to the proposed Project.

The analysis shows that the proposed Project would not cause an increase of 0.02 or more of the D/C ratio of any freeway link operating at LOS F or worse. The amount of proposed project-related traffic that would be added at all other freeway links would not be of sufficient magnitude to meet or exceed the threshold of significance of the CMP relative to CEQA baseline conditions.

Based on the above, the proposed Project would not result in a significant traffic impact under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Tables 3.7-23 and 3.7-24 summarize the change to freeway analysis locations due to the proposed Project compared to the NEPA Baseline. The results of the analysis indicate that the proposed Project would not cause an increase of 0.02 or more in the D/C ratio at any of the CMP freeway monitoring locations and/or freeway analysis links that would result in LOS F during the analysis year; therefore, no further freeway system analysis is required at those locations.

Consequently, traffic impacts on the freeway system would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Table 3.7-21: CEQA Baseline Compared to With Proposed Project Freeway Analysis—A.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				2026 With Proposed Project						2012 CEQA Baseline				2026 With Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	8,916	45.9	F	0.95	8,926	46.1	F	0.95	0.00	No	7,291	31.8	D	-	7,327	32.1	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,929	46.1	F	0.95	8,952	46.4	F	0.95	0.00	No	8,227	38.9	E	0.88	8,267	39.3	E	0.88	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	7,619	25.2	C	-	7,687	25.5	C	-	-	No	9,832	35.9	E	0.84	9,931	36.6	E	0.85	0.01	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,104	34.5	D	-	7,195	35.0	D	-	-	No	8,002	40.7	E	0.89	8,115	41.6	E	0.90	0.01	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,943	40.0	E	0.88	6,009	40.7	E	0.89	0.01	No	6,759	51.9	F	1.00	6,850	53.7	F	1.01	0.01	No
#6 I-110	South of C Street (CMP monitoring station—south of “C” St)	9,400	4,598	18.8	C	-	4,651	19.0	C	-	-	No	3,284	13.4	B	-	3,324	13.6	B	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,829	21.4	C	-	7,829	21.4	C	-	-	No	9,841	27.6	D	-	9,841	27.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	11,854	53.5	F	1.01	11,854	53.5	F	1.01	0.00	No	7,526	24.8	C	-	7,526	24.8	C	-	-	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,466	23.9	C	-	2,533	24.5	C	-	-	No	2,199	21.3	C	-	2,270	21.9	C	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	442	2.9	A	-	608	3.9	A	-	-	No	756	4.9	A	-	1,001	6.5	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).
[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.
[2]Non-CMP location

Table 3.7-22: CEQA Baseline Compared to With Proposed Project Freeway Analysis—P.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				2026 With Proposed Project						2012 CEQA Baseline				2026 With Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	7,264	31.7	D	-	7,265	31.7	D	-	-	No	8,122	38.0	E	0.86	8,128	38.1	E	0.86	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,003	37.0	E	0.85	8,005	37.0	E	0.85	0.00	No	8,739	43.9	E	0.93	8,746	44.0	E	0.93	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	8,768	30.1	D	-	8,777	30.2	D	-	-	No	7,808	25.9	C	-	7,831	26.0	C	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,699	38.3	E	0.86	7,721	38.4	E	0.86	0.00	No	7,021	34.0	D	-	7,048	34.2	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,724	37.8	E	0.85	5,729	37.9	E	0.85	0.00	No	6,148	42.4	E	0.91	6,170	42.7	E	0.91	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	3,127	12.8	B	-	3,142	12.9	B	-	-	No	4,575	18.7	C	-	4,585	18.8	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	9,129	25.2	C	-	9,129	25.2	C	-	-	No	7,082	19.3	C	-	7,082	19.3	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,238	32.5	D	-	9,238	32.5	D	-	-	No	11,313	47.5	F	0.96	11,313	47.5	F	0.96	0.00	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,690	26.0	D	-	2,703	26.1	D	-	-	No	3,015	29.2	D	-	3,064	29.6	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	1,021	6.6	A	-	1,089	7.0	A	-	-	No	791	5.1	A	-	838	5.4	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).
[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.
[2]Non-CMP location

Table 3.7-23: 2026 NEPA Baseline Compared to 2026 With Proposed Project Freeway Analysis—A.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2026 NEPA Baseline				2026 With Proposed Project						2026 NEPA Baseline				2026 With Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	9,243	50.0	F	0.98	9,245	50.1	F	0.98	0.00	No	7,691	34.6	D	-	7,697	34.7	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	9,234	49.9	F	0.98	9,237	50.0	F	0.98	0.00	No	8,360	40.1	E	0.89	8,366	40.2	E	0.89	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	8,118	27.2	D	-	8,128	27.2	D	-	-	No	10,572	41.1	E	0.90	10,588	41.2	E	0.90	0.00	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	8,744	48.3	F	0.97	8,758	48.4	F	0.97	0.00	No	9,179	54.4	F	1.02	9,197	54.7	F	1.02	0.00	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	7,969	97.4	F	1.18	7,979	98.0	F	1.18	0.00	No	8,670	205.9	F	1.28	8,685	211.7	F	1.29	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	6,384	26.6	D	-	6,392	26.7	D	-	-	No	4,486	18.4	C	-	4,492	18.4	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	8,037	21.9	C	-	8,037	21.9	C	-	-	No	10,121	28.6	D	-	10,121	28.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	12,796	67.8	F	1.09	12,796	67.8	F	1.09	0.00	No	8,892	30.7	D	-	8,892	30.7	D	-	-	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	3,405	32.9	D	-	3,416	33.0	D	-	-	No	3,516	34.1	D	-	3,526	34.2	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	2,578	16.6	B	-	2,604	16.8	B	-	-	No	3,407	22.0	C	-	3,445	22.2	C	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Table 3.7-24: 2026 NEPA Baseline Compared to 2026 With Proposed Project Freeway Analysis—P.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2026 NEPA Baseline				2026 With Proposed Project						2026 NEPA Baseline				2026 With Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	7,514	33.3	D	-	7,515	33.4	D	-	-	No	8,733	43.9	E	0.93	8,734	43.9	E	0.93	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,228	38.9	E	0.88	8,230	39.0	E	0.88	0.00	No	9,041	47.5	F	0.96	9,042	47.5	F	0.96	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	9,036	31.5	D	-	9,042	31.5	D	-	-	No	7,875	26.2	D	-	7,880	26.2	D	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	8,449	44.9	E	0.94	8,458	45.0	E	0.94	0.00	No	7,120	34.6	D	-	7,126	34.6	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	6,269	43.9	E	0.93	6,274	44.0	E	0.93	0.00	No	6,318	44.6	E	0.94	6,323	44.7	E	0.94	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of “C” St)	9,400	5,235	21.4	C	-	5,241	21.4	C	-	-	No	5,153	21.1	C	-	5,156	21.1	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,271	19.8	C	-	7,271	19.8	C	-	-	No	9,358	25.9	C	-	9,358	25.9	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,934	36.6	E	0.85	9,934	36.6	E	0.85	0.00	No	13,025	72.3	F	1.11	13,025	72.3	F	1.11	0.00	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	4,223	44.8	E	0.90	4,237	45.2	F	0.90	0.00	No	3,406	32.9	D	-	3,411	33.0	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	2,281	14.7	B	-	2,304	14.9	B	-	-	No	1,928	12.4	B	-	1,945	12.5	B	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).
[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.
[2]Non-CMP location

Impact TRANS-5: Proposed project operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.

Vehicular delays resulting from rail trips associated with the proposed Project were estimated by adding rail trips resulting from the expanded container terminal and associated throughput growth to the applicable CEQA baseline (January 2012 through the end of December 2012). Tables 3.7-26 through 3.7-31 show the results of the vehicular delay calculations at at-grade crossings. One table is provided for each of the major main lines. In the Pomona/Montclair area, the UP Alhambra and Los Angeles Subdivisions are close parallel lines. For the at-grade crossing impact analysis, these lines were treated as one railroad corridor; therefore, the railroad volumes from the combined lines were used in predicting impacts in this segment.

CEQA Impact Determination

Rail Volumes

There would be an increase in the cargo throughput at the YTI terminal from 996,109 TEUs in 2012 to a forecast cargo throughput of 1,913,000 TEUs in 2026 with the proposed Project. In the baseline year 2012, all on-dock and off-dock direct intermodal containers to and from the YTI Terminal amounted to 251,631 marine container lifts, or 434,312 TEUs (at 1.726 TEUs per lift). With implementation of the proposed Project, this would increase to 437,257 marine container lifts, or 765,200 TEUs (at 1.75 TEUs per lift), which would be an increase of 185,627 marine container lifts, or 330,888 TEUs. This would result in an increase in the on-dock and off-dock direct intermodal[3] total rail volumes of about 2.1 peak month average daily trains (a decrease of 1.16 6,000-foot trains, but an increase of 2.27 8,000-foot trains and 0.94 10,000-foot trains, and no change in 12,000-foot trains). These 2.1 trains are considered to be the "Project Trains" for evaluating the proposed Project's rail impacts.

Some parameters used in the estimation of the YTI Terminal-related 2012 on-dock and off-dock direct intermodal rail volumes were modified in the 2026 proposed project rail volume estimates; these include:

- on-dock and off-dock intermodal yards maximum practical capacities;
- marine terminal specific lifts to TEUs conversion factor;
- monthly peaking factor;
- average rail car length (depends on the mix of cars of varying lengths that make up the trains); and
- market-wise distribution of trains by length (percentage of trains that are 6,000 feet, 8,000 feet, 10,000 feet, and 12,000 feet long, including locomotives).

For both 2012 and 2026 with proposed Project, on-dock and off-dock direct intermodal rail volumes associated with the YTI Terminal are allocated to specific railroad tracks

[3] *Direct intermodal* refers to cargo that is moved as intact marine containers between a marine terminal and an intermodal yard.

using status quo routing and the difference in the rail volumes provided "Project Trains" estimates by segment. These trains were then added to background train volumes for 2012 to assess grade crossing delays in the baseline year (2012). The "Project Trains" were also uniformly distributed over 24 hours and assigned to four different time periods of the day. Table 3.7-25 shows the estimated CEQA Baseline conditions (2012) rail volumes and "Project Trains" by segment.

Table 3.7-25: CEQA Baseline Conditions (2012) Peak Month Average Daily Rail Volumes and "Project Trains" by Segment, Trains per Day

		CEQA Baseline (2012)			
Railroad Subdivision	Rail Segment	Daily Freight Rail Volume	Daily Passenger Rail Volume	Daily Total Rail Volume	Daily "Project Trains"
UP Trains					
UP LA Sub	East LA–Pomona	12.0	12.0	24.0	0.7
	Pomona–Montclair	14.2	12.0	26.2	0.7
	Montclair–Mira Loma	16.6	12.0	28.6	0.7
	Mira Loma–W Riverside	16.1	12.0	28.1	0.7
UP Alhambra Sub	LATC–El Monte	18.7	-	18.7	0.7
	El Monte–Bassett	18.7	36.8	55.5	0.7
	Bassett–Industry	18.7	0.8	19.5	0.7
	Industry–Pomona	23.6	0.8	24.4	0.7
	Pomona–Montclair	21.4	0.8	22.2	0.7
	Montclair–Kaiser	23.9	0.8	24.7	0.7
	Kaiser–W Colton	25.7	0.8	26.5	0.7
	W Colton–Colton	25.7	0.8	26.5	0.6
UP Mojave (Palmdale)	W Colton–Silverwood	19.0	-	19.0	0.1
UP Yuma	Colton–Indio	39.3	0.8	40.1	1.1
BNSF San Bernardino Sub	W Riverside–Riverside	16.1	-	16.1	0.7
	Riverside–Highgrove	16.1	-	16.1	0.7
	Highgrove–Colton	16.1	-	16.1	0.7
	Colton–San Bernardino	1.9	-	1.9	0.1
BNSF Cajon	San Bernardino–Keenbrook	1.9	-	1.9	0.1
	Keenbrook–Silverwood	1.9	-	1.9	0.1
	Silverwood–Barstow	8.8	-	8.8	0.2
BNSF Trains					
BNSF San Bernardino Sub	Hobart–Fullerton	31.5	54.0	85.5	0.7
	Fullerton–Atwood	31.5	11.0	42.5	0.7
	Atwood–W Riverside	34.6	25.0	59.6	0.7
	W Riverside–Riverside	37.5	37.0	74.5	0.7
	Riverside–Highgrove	37.5	10.0	47.5	0.7
	Highgrove–Colton	37.5	10.0	47.5	0.7
	Colton–San Bernardino	41.5	10.0	51.5	0.7
BNSF Cajon	San Bernardino–Keenbrook	49.1	2.0	51.1	0.7
	Keenbrook–Silverwood	49.1	2.0	51.1	0.7

Table 3.7-25: CEQA Baseline Conditions (2012) Peak Month Average Daily Rail Volumes and "Project Trains" by Segment, Trains per Day

		CEQA Baseline (2012)			
Railroad Subdivision	Rail Segment	Daily Freight Rail Volume	Daily Passenger Rail Volume	Daily Total Rail Volume	Daily "Project Trains"
	Silverwood–Barstow	49.1	2.0	51.1	0.7
BNSF & UP Trains					
BNSF San Bernardino Sub	W Riverside–Riverside	53.6	37.0	90.6	1.4
	Riverside–Highgrove	53.6	10.0	63.6	1.4
	Highgrove–Colton	53.6	10.0	63.6	1.4
	Colton–San Bernardino	43.4	10.0	53.4	0.8
BNSF Cajon	San Bernardino–Keenbrook	51.0	2.0	53.0	0.8
	Keenbrook–Silverwood	69.9	2.0	71.9	0.8
	Silverwood–Barstow	57.9	2.0	59.9	0.9

Source: QuickTrip—Train Builder Integrated Model August 2013 Version; Non-intermodal and Passenger Trains Data

Tables 3.7-26 through 3.7-31 list the delays at at-grade crossings for the CEQA baseline plus proposed Project condition.

Based on the calculations of the "Project Trains," delay impacts at at-grade crossings would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Because there are no at-grade railroad crossings between the proposed project site and the greater Los Angeles intermodal railyards (i.e., BNSF's Hobart yard, UP's ELA), there are no rail-related at-grade impacts in this area. As such, impacts beyond these railyard locations are outside of USACE's federal scope of analysis and are therefore not evaluated under NEPA. Because potential vehicle delay impacts at at-grade railroad crossings beyond these geographical limits fall outside of USACE's federal scope of analysis (see Section 2.7), no impact determination under NEPA is required.

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Table 3.7-26: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	
San Bernardino MP 0.0															
Laurel St.	2	2,260	54.2	53.4	0.8	109.8	107.3	2.5	3.5	3.4	0.1	5.8	5.6	0.2	No
Olive St.	2	2,690	54.2	53.4	0.8	109.8	107.3	2.5	4.2	4.1	0.1	5.9	5.7	0.2	No
E St.	2	710	54.2	53.4	0.8	109.8	107.3	2.5	1.1	1.0	0.0	5.4	5.3	0.2	No
H St.	2	1,420	54.2	53.4	0.8	109.8	107.3	2.5	2.1	2.1	0.1	5.6	5.4	0.2	No
Valley Blvd.	2	10,620	54.2	53.4	0.8	109.8	107.3	2.5	21.6	20.9	0.6	8.6	8.3	0.2	No
Colton Crossing MP 3.2															
Highgrove Junction MP 6.1 (Connection to Perris via MetroLink)															
Main St.	2	2,580	65.0	63.6	1.4	136.9	132.8	4.1	5.1	4.9	0.2	7.4	7.2	0.3	No
Riverside-San Bernardino County Line MP 6.41															
Center St.	4	6,190	65.0	63.6	1.4	137.2	133.1	4.1	12.4	11.9	0.5	7.5	7.2	0.3	No
Iowa Av.	4	22,810	65.0	63.6	1.4	137.2	133.1	4.1	57.2	55.1	2.1	10.3	10.0	0.4	No
Palmyrita Av.	2	3,740	65.0	63.6	1.4	136.9	132.8	4.1	7.6	7.3	0.3	7.6	7.3	0.3	No
Chicago Av.	4	13,510	65.0	63.6	1.4	137.2	133.1	4.1	29.6	28.5	1.1	8.5	8.2	0.3	No
Spruce St.	4	7,210	65.0	63.6	1.4	137.2	133.1	4.1	14.6	14.1	0.5	7.6	7.3	0.3	No
3rd St.	4	10,860	65.0	63.6	1.4	137.2	133.1	4.1	23.0	22.1	0.8	8.1	7.8	0.3	No
Mission Inn (7th St.)	4	5,310	65.0	63.6	1.4	137.2	133.1	4.1	10.5	10.1	0.4	7.4	7.1	0.3	No
Riverside Yard and Amtrak Station MP 10.02–10.16															
Cridge St.	2	3,750	92.0	90.6	1.4	156.7	152.6	4.1	8.2	7.9	0.3	8.4	8.1	0.3	No
West Riverside Junction MP 10.6 (Connection to UP Los Angeles Sub)															
Jane St.	2	2,150	60.3	59.6	0.7	101.9	99.7	2.2	2.9	2.8	0.1	5.1	5.0	0.1	No
Mary St.	4	11,890	60.3	59.6	0.7	102.2	100.0	2.2	17.7	17.2	0.5	5.8	5.7	0.2	No
Washington St.	2	8,260	60.3	59.6	0.7	101.9	99.7	2.2	13.0	12.7	0.4	6.4	6.2	0.2	No
Madison St.	4	15,650	60.3	59.6	0.7	102.2	100.0	2.2	24.5	23.8	0.7	6.3	6.1	0.2	No

Table 3.7-26: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	
Jefferson St.	2	8,160	60.3	59.6	0.7	101.9	99.7	2.2	12.8	12.5	0.4	6.3	6.1	0.2	No
Adams St.	4	17,440	60.3	59.6	0.7	102.2	100.0	2.2	28.0	27.2	0.8	6.5	6.3	0.2	No
Jackson St.	4	7,780	60.3	59.6	0.7	102.2	100.0	2.2	11.0	10.7	0.3	5.4	5.3	0.2	No
Gibson St.	2	840	60.3	59.6	0.7	101.9	99.7	2.2	1.1	1.1	0.0	4.9	4.8	0.1	No
Harrison St.	2	6,630	60.3	59.6	0.7	101.9	99.7	2.2	10.0	9.7	0.3	6.0	5.8	0.2	No
Tyler St.	4	15,560	60.3	59.6	0.7	102.2	100.0	2.2	24.4	23.6	0.7	6.3	6.1	0.2	No
Pierce St.	2	11,130	60.3	59.6	0.7	101.9	99.7	2.2	19.1	18.6	0.6	7.2	7.0	0.2	No
Buchanan St.	2	9,530	60.3	59.6	0.7	101.9	99.7	2.2	15.6	15.1	0.5	6.7	6.5	0.2	No
Magnolia Ave. eastbound	2	8,760	60.3	59.6	0.7	101.9	99.7	2.2	14.0	13.6	0.4	6.5	6.3	0.2	No
Magnolia Ave. westbound	2	8,760	60.3	59.6	0.7	101.9	99.7	2.2	14.0	13.6	0.4	6.5	6.3	0.2	No
Mckinley St.	4	26,530	60.3	59.6	0.7	102.2	100.0	2.2	49.3	47.8	1.4	8.0	7.8	0.2	No
Radio Rd.	2	4,290	60.3	59.6	0.7	101.9	99.7	2.2	6.1	5.9	0.2	5.5	5.3	0.2	No
Joy St.	2	7,250	60.3	59.6	0.7	101.9	99.7	2.2	11.1	10.8	0.3	6.1	5.9	0.2	No
Sheridan St.	2	2,360	60.3	59.6	0.7	101.9	99.7	2.2	3.2	3.1	0.1	5.1	5.0	0.1	No
Cota St.	4	6,010	60.3	59.6	0.7	102.2	100.0	2.2	8.3	8.1	0.2	5.3	5.1	0.2	No
Railroad St.	4	9,630	60.3	59.6	0.7	102.2	100.0	2.2	13.9	13.5	0.4	5.6	5.5	0.2	No
Smith St.	4	13,630	60.3	59.6	0.7	102.2	100.0	2.2	20.8	20.2	0.6	6.0	5.9	0.2	No
Auto Center Dr.	2	11,520	60.3	59.6	0.7	101.9	99.7	2.2	20.1	19.5	0.6	7.3	7.1	0.2	No
Riverside-Orange County Line															
Kellogg Dr.	4	6,840	60.3	59.6	0.7	102.2	100.0	2.2	9.6	9.4	0.3	5.4	5.2	0.2	No
Lakeview Ave.	3	18,780	60.3	59.6	0.7	102.1	99.8	2.2	34.8	33.8	1.0	8.0	7.8	0.2	No
Richfield Rd.	4	9,430	60.3	59.6	0.7	102.2	100.0	2.2	13.7	13.3	0.4	5.7	5.5	0.2	No

Table 3.7-26: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	
Atwood Junction MP 40.6 (Connection to Old Olive Sub)															
Van Buren St.	2	6,740	43.2	42.5	0.7	85.4	83.2	2.2	9.2	8.9	0.3	5.4	5.2	0.2	No
Jefferson St.	3	6,320	43.2	42.5	0.7	85.5	83.3	2.2	8.1	7.8	0.3	4.9	4.7	0.2	No
Tustin Av (Rose Dr.)	4	29,050	43.2	42.5	0.7	85.7	83.4	2.2	52.0	50.3	1.7	7.9	7.7	0.3	No
Orangethorpe Ave.	4	28,200	43.2	42.5	0.7	85.7	83.4	2.2	49.7	48.0	1.6	7.7	7.5	0.2	No
Kraemer Blvd.	4	19,700	43.2	42.5	0.7	85.7	83.4	2.2	29.8	28.8	1.0	6.2	6.0	0.2	No
Placentia Ave.	4	14,430	43.2	42.5	0.7	85.7	83.4	2.2	20.1	19.5	0.7	5.5	5.3	0.2	No
State College Blvd.	4	23,480	43.2	42.5	0.7	85.7	83.4	2.2	37.8	36.6	1.2	6.8	6.6	0.2	No
Acacia Ave.	4	6,710	43.2	42.5	0.7	85.7	83.4	2.2	8.4	8.2	0.3	4.8	4.6	0.2	No
Raymond Ave.	4	20,940	43.2	42.5	0.7	85.7	83.4	2.2	32.3	31.3	1.1	6.4	6.2	0.2	No
Fullerton Junction MP 45.5–MP 165.5															
Orange-LA County Line															
Valley View Ave.	4	24,080	86.2	85.5	0.7	120.2	117.9	2.2	48.5	47.2	1.3	8.7	8.5	0.2	No
Rosecrans/ Marquardt Ave.	4	22,750	86.2	85.5	0.7	120.2	117.9	2.2	44.7	43.5	1.2	8.4	8.2	0.2	No
Lakeland Rd.	2	6,410	86.2	85.5	0.7	119.7	117.5	2.2	10.6	10.3	0.3	6.7	6.5	0.2	No
Los Nietos Rd.	4	20,070	86.2	85.5	0.7	120.2	117.9	2.2	37.6	36.5	1.0	7.9	7.7	0.2	No
Norwalk Blvd.	4	25,720	86.2	85.5	0.7	120.2	117.9	2.2	53.5	52.0	1.4	9.1	8.9	0.2	No
Pioneer Blvd.	4	15,010	86.2	85.5	0.7	120.2	117.9	2.2	25.9	25.2	0.7	7.0	6.8	0.2	No
Passons Blvd.	4	12,450	86.2	85.5	0.7	120.2	117.9	2.2	20.6	20.1	0.6	6.6	6.5	0.2	No
Serapis Ave.	2	6,150	86.2	85.5	0.7	119.7	117.5	2.2	10.1	9.8	0.3	6.6	6.4	0.2	No
Commerce Yard MP 148.5															
Hobart Yard MP 146.0															

Table 3.7-26: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	
OVERALL															None
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)									1,098.9	1,065.2	33.8				
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)												7.2	7.0	0.2	

Table 3.7-27: BNSF Cajon Subdivision, from San Bernardino to Barstow, 2012 Baseline Plus Proposed Project

Boundary/Junction –Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	W/Proj	W/O Proj	Change	
Barstow MP 0															
Lenwood Rd.	2	4,460	60.9	59.9	0.9	108.7	106.6	2.1	5.7	5.6	0.1	4.8	4.7	0.1	No
Hinkley Rd.	2	470	60.9	59.9	0.9	108.7	106.6	2.1	0.6	0.5	0.0	4.2	4.1	0.1	No
Indian Trail Rd.	2	540	60.9	59.9	0.9	108.7	106.6	2.1	0.6	0.6	0.0	4.2	4.1	0.1	No
Vista Rd.	2	2,750	60.9	59.9	0.9	108.7	106.6	2.1	3.4	3.3	0.1	4.5	4.4	0.1	No
Turner Rd.	2	30	60.9	59.9	0.9	108.7	106.6	2.1	0.0	0.0	0.0	4.2	4.1	0.1	No
North Bryman Rd.	2	160	60.9	59.9	0.9	108.7	106.6	2.1	0.2	0.2	0.0	4.2	4.1	0.1	No
South Bryman Rd.	2	1,920	60.9	59.9	0.9	108.7	106.6	2.1	2.3	2.3	0.1	4.4	4.3	0.1	No
Robinson Ranch Rd.	2	120	60.9	59.9	0.9	108.7	106.6	2.1	0.1	0.1	0.0	4.2	4.1	0.1	No
1st St.	2	680	60.9	59.9	0.9	128.4	125.8	2.6	1.1	1.1	0.0	6.0	5.8	0.1	No
6th St.	4	3,580	60.9	59.9	0.9	149.1	146.1	3.0	8.2	8.0	0.2	8.4	8.2	0.2	No
Silverwood Junction MP 56.6															
Keenbrook Junction MP 69.4															
Swarthout Canyon Rd.	2	180	72.9	71.9	0.9	213.6	209.9	3.7	0.7	0.7	0.0	13.7	13.4	0.3	No
Devore Rd/Glen Helen Pkwy.	4	6,240	72.9	71.9	0.9	214.2	210.4	3.7	25.4	24.9	0.6	15.0	14.7	0.3	No
Dike Junction															
Palm Ave.	2	11,790	53.8	53.0	0.8	161.1	157.7	3.4	45.7	44.5	1.2	15.6	15.2	0.4	No
San Bernardino MP 81.4															
OVERALL															None
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)									94.2	91.9	2.3				
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)												11.0	10.7	0.3	

Table 3.7-28: UP Alhambra Subdivision from Los Angeles Transportation Center to Colton Crossing, 2012 Baseline Plus Proposed Project (Excluding Segment that Is Combined with UP LA Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	
LATC MP 482.9															
San Pablo St.	4	4,010	19.4	18.7	0.7	96.6	92.5	4.1	12.3	11.7	0.6	11.3	10.7	0.6	No
Vineburn Ave.	2	1,340	19.4	18.7	0.7	68.1	65.3	2.8	2.0	1.9	0.1	5.4	5.2	0.3	No
Worth/Boca Rd.	2	7,760	19.4	18.7	0.7	68.1	65.3	2.8	14.3	13.6	0.7	7.5	7.1	0.4	No
Valley Blvd.	4	27,200	19.4	18.7	0.7	45.6	43.8	1.9	25.7	24.5	1.2	4.1	3.9	0.2	No
Ramona St.	2	12,580	19.4	18.7	0.7	68.1	65.3	2.8	25.6	24.4	1.2	8.6	8.2	0.4	No
Mission Rd.	3	22,780	19.4	18.7	0.7	68.2	65.4	2.8	51.5	49.0	2.5	10.0	9.6	0.5	No
Del Mar Ave.	2	20,830	19.4	18.7	0.7	68.1	65.3	2.8	63.0	59.9	3.1	15.4	14.6	0.8	No
San Gabriel Blvd.	4	34,720	19.4	18.7	0.7	68.3	65.4	2.8	86.9	82.7	4.2	11.6	11.1	0.6	No
Walnut Grove Ave.	3	15,170	19.4	18.7	0.7	39.9	38.3	1.6	9.7	9.2	0.5	2.6	2.5	0.1	No
Encinita Ave.	2	6,320	19.4	18.7	0.7	39.9	38.3	1.6	3.6	3.4	0.2	2.2	2.1	0.1	No
Lower Azusa Rd.	4	17,210	19.4	18.7	0.7	40.0	38.4	1.6	10.5	10.0	0.5	2.4	2.3	0.1	No
Temple City Blvd.	4	20,650	19.4	18.7	0.7	40.0	38.4	1.6	13.3	12.7	0.6	2.6	2.5	0.1	No
Baldwin Ave.	4	25,620	19.4	18.7	0.7	40.0	38.4	1.6	18.0	17.2	0.8	3.0	2.8	0.1	No
Arden Dr.	4	10,930	19.4	18.7	0.7	40.0	38.4	1.6	6.1	5.8	0.3	2.1	2.0	0.1	No
El Monte Junction MP 494.99															
Tyler Ave.	4	11,640	56.2	55.5	0.7	66.4	64.8	1.6	8.9	8.6	0.3	3.2	3.1	0.1	No
Cogswell Rd.	2	9,960	56.2	55.5	0.7	66.2	64.5	1.6	8.6	8.3	0.3	3.8	3.7	0.1	No
Temple Ave.	4	26,760	56.2	55.5	0.7	66.4	64.8	1.6	26.4	25.5	0.9	4.5	4.4	0.1	No
Bassett Junction MP 498.45															
Vineland Ave.	2	12,410	20.2	19.5	0.7	40.5	38.9	1.6	8.7	8.3	0.4	3.0	2.8	0.1	No
Puente Ave.	4	31,450	20.2	19.5	0.7	40.6	39.0	1.6	25.2	24.0	1.2	3.6	3.4	0.2	No
Orange Ave.	2	5,700	20.2	19.5	0.7	40.5	38.9	1.6	3.2	3.1	0.1	2.2	2.1	0.1	No
California Ave.	2	18,560	20.2	19.5	0.7	40.5	38.9	1.6	17.0	16.2	0.8	4.4	4.2	0.2	No

Table 3.7-28: UP Alhambra Subdivision from Los Angeles Transportation Center to Colton Crossing, 2012 Baseline Plus Proposed Project (Excluding Segment that Is Combined with UP LA Subdivision)

		Average Daily Traffic	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			
Boundary/Junction–Street	# of Lanes	(Vehicles/ Day)	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	Significant Impacts?
City of Industry Junction MP 501.5															
Fullerton Rd.	4	18,080	25.1	24.4	0.7	51.0	49.4	1.6	14.3	13.8	0.5	3.2	3.1	0.1	No
Fairway Dr.	4	19,620	25.1	24.4	0.7	51.0	49.4	1.6	15.9	15.3	0.6	3.3	3.2	0.1	No
Lemon Rd.	4	16,990	25.1	24.4	0.7	51.0	49.4	1.6	13.2	12.8	0.5	3.1	3.0	0.1	No
Brea Canyon Rd.	2	14,230	25.1	24.4	0.7	50.9	49.3	1.6	13.5	13.0	0.5	4.1	4.0	0.2	No
Pomona Junction MP 514.3 LA-San Bernardino County Line MP 516.7	HANDLED SEPARATELY DUE TO PROXIMITY TO UP LA SUB														
Montclair Junction															
Bon View Ave.	2	9,970	25.3	24.7	0.7	50.2	48.5	1.6	7.7	7.4	0.3	3.2	3.0	0.1	No
Vineyard Ave.	4	30,600	25.3	24.7	0.7	50.3	48.7	1.6	28.8	27.7	1.1	4.2	4.0	0.2	No
Milliken Ave.	6	34,020	25.3	24.7	0.7	50.4	48.8	1.6	27.8	26.7	1.1	3.4	3.3	0.1	No
Kaiser Junction MP 527.5															
West Colton MP 534.7															
Colton Crossing MP 538.70															
OVERALL															None
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)									561.9	536.8	25.1				
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)												5.1	4.9	0.2	

Table 3.7-29: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2012 Baseline Plus Proposed Project (Excluding Segment That Is Combined with UP Alhambra Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	
East Los Angeles MP 5.85															
S. Vail Ave.	2	7,810	24.6	24.0	0.7	49.5	47.0	2.5	7.9	7.4	0.5	4.1	3.9	0.3	No
Maple Ave.	2	5,500	24.6	24.0	0.7	49.5	47.0	2.5	5.2	4.9	0.3	3.8	3.5	0.2	No
S. Greenwood Ave.	4	7,200	24.6	24.0	0.7	49.7	47.1	2.5	6.5	6.1	0.4	3.5	3.3	0.2	No
Montebello Blvd.	4	20,340	24.6	24.0	0.7	49.7	47.1	2.5	22.2	20.7	1.4	4.6	4.3	0.3	No
Durfee Ave.	2	13,810	24.6	24.0	0.7	35.0	33.4	1.6	8.0	7.6	0.5	2.7	2.5	0.1	No
Rose Hills Rd.	4	9,350	24.6	24.0	0.7	33.6	32.1	1.5	3.7	3.5	0.2	1.6	1.5	0.1	No
Mission Mill Rd.	2	2,160	24.6	24.0	0.7	33.5	32.0	1.5	0.8	0.8	0.0	1.5	1.4	0.1	No
Workman Mill	4	7,570	24.6	24.0	0.7	33.6	32.1	1.5	2.9	2.8	0.2	1.6	1.5	0.1	No
Turnbull Canyon Rd.	4	14,290	24.6	24.0	0.7	33.6	32.1	1.5	6.0	5.7	0.3	1.8	1.7	0.1	No
Stimson Ave. & Puente Ave.	4	14,570	24.6	24.0	0.7	33.6	32.1	1.5	6.2	5.8	0.4	1.8	1.7	0.1	No
Bixby Dr.	2	2,930	24.6	24.0	0.7	33.5	32.0	1.5	1.1	1.0	0.1	1.5	1.4	0.1	No
Fullerton Rd.	4	23,980	24.6	24.0	0.7	33.6	32.1	1.5	11.9	11.2	0.7	2.2	2.1	0.1	No
Nogales St.	6	37,330	24.6	24.0	0.7	33.7	32.2	1.5	18.9	17.8	1.1	2.3	2.2	0.1	No
Fairway Dr.	4	25,090	24.6	24.0	0.7	33.6	32.1	1.5	12.7	11.9	0.7	2.3	2.2	0.1	No
Lemon St.	4	14,900	24.6	24.0	0.7	33.6	32.1	1.5	6.4	6.0	0.4	1.8	1.7	0.1	No
Pomona Junction MP 31.9															
LA-San Bernardino County Line MP 33.17	HANDLED SEPARATELY DUE TO PROXIMITY TO UP ALHAMBRA SUB														

Table 3.7-29: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2012 Baseline Plus Proposed Project (Excluding Segment That Is Combined with UP Alhambra Subdivision)

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	
E. Montclair Junction MP 35.02															
Bonview Av	2	3,460	29.2	28.6	0.7	42.5	41.0	1.5	1.7	1.6	0.1	2.0	1.9	0.1	No
Grove Av	6	39,240	29.2	28.6	0.7	42.7	41.2	1.5	26.9	25.8	1.2	3.1	3.0	0.1	No
Vineyard Av	4	4,420	29.2	28.6	0.7	42.6	41.1	1.5	2.1	2.0	0.1	1.9	1.8	0.1	No
Archibald Av	4	5,230	29.2	28.6	0.7	42.6	41.1	1.5	2.6	2.4	0.1	1.9	1.8	0.1	No
San Bernardino-Riverside County Line MP 43.36															
Milliken Av	6	20,890	29.2	28.6	0.7	42.7	41.2	1.5	11.5	11.0	0.5	2.3	2.2	0.1	No
Mira Loma Junction MP 45.7															
Bellegrave Av	2	7,680	28.8	28.1	0.7	41.6	40.1	1.5	4.2	4.0	0.2	2.3	2.2	0.1	No
Rutile St	2	8,240	28.8	28.1	0.7	41.6	40.1	1.5	4.5	4.3	0.2	2.3	2.2	0.1	No
Clay St	4	16,250	28.8	28.1	0.7	41.7	40.2	1.5	9.0	8.6	0.4	2.3	2.2	0.1	No
Jurupa Av	2	14,080	28.8	28.1	0.7	48.9	47.0	1.9	13.4	12.8	0.6	4.3	4.1	0.2	No
Mountain View Av	2	1,710	28.8	28.1	0.7	48.9	47.0	1.9	1.1	1.1	0.1	2.5	2.4	0.1	No
Streeter Av	4	13,810	28.8	28.1	0.7	49.1	47.2	1.9	10.4	9.9	0.5	3.1	2.9	0.1	No
Palm Av	2	7,470	28.8	28.1	0.7	46.0	44.3	1.7	5.0	4.8	0.2	2.8	2.6	0.1	No
Brockton Av	4	13,310	28.8	28.1	0.7	49.1	47.2	1.9	10.0	9.5	0.5	3.0	2.9	0.1	No
Riverside Av	2	11,450	28.8	28.1	0.7	48.9	47.0	1.9	9.9	9.4	0.5	3.7	3.6	0.2	No
Panorama Road	2	6,360	28.8	28.1	0.7	48.9	47.0	1.9	4.7	4.5	0.2	3.0	2.9	0.1	No
West Riverside Junction MP 56.7															
OVERALL															None
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)									237.4	224.8	12.6				
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)												2.7	2.5	0.1	

Table 3.7-30: Combined UP Alhambra and LA Subdivisions in Pomona and Montclair Area, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	
Pomona Junction MP 514.3															
Hamilton Blvd.	4	7,910	49.7	48.4	1.3	86.2	82.9	3.3	8.9	8.5	0.4	4.3	4.2	0.2	No
Park Ave.	2	5,600	49.7	48.4	1.3	85.9	82.7	3.2	6.5	6.2	0.3	4.6	4.4	0.2	No
Main St.	2	1,550	49.7	48.4	1.3	85.9	82.7	3.2	1.6	1.6	0.1	4.0	3.8	0.2	No
Palomares St.	2	3,820	49.7	48.4	1.3	85.9	82.7	3.2	4.2	4.1	0.2	4.3	4.1	0.2	No
San Antonio Ave.	4	6,810	49.7	48.4	1.3	86.2	82.9	3.3	7.5	7.2	0.3	4.3	4.1	0.2	No
LA-San Bernardino County Line MP 516.7															
Monte Vista Ave.	4	12,130	49.7	48.4	1.3	86.2	82.9	3.3	14.3	13.7	0.6	4.7	4.5	0.2	No
San Antonio Ave.	4	10,270	49.7	48.4	1.3	86.2	82.9	3.3	11.8	11.3	0.5	4.5	4.3	0.2	No
Vine Ave.	2	7,540	49.7	48.4	1.3	85.9	82.7	3.2	9.2	8.8	0.4	4.9	4.7	0.2	No
Sultana Ave.	2	11,230	49.7	48.4	1.3	85.9	82.7	3.2	15.4	14.7	0.7	5.8	5.6	0.3	No
Campus Ave.	2	10,550	49.7	48.4	1.3	85.9	82.7	3.2	14.2	13.5	0.6	5.6	5.4	0.2	No
Montclair Junction															
OVERALL															None
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)									93.7	89.5	4.2				
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)												4.9	4.7	0.2	

Table 3.7-31: UP Yuma Subdivision from Colton Crossing to Indio, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	
Colton Crossing MP 539.0															
Hunts Lane	4	13,580	41.3	40.1	1.1	94.3	91.1	3.2	21.0	20.2	0.8	6.0	5.8	0.2	No
Whittier Ave.	2	190	41.3	40.1	1.1	111.4	107.6	3.8	0.3	0.3	0.0	6.6	6.3	0.3	No
Beaumont Ave.	2	460	41.3	40.1	1.1	111.4	107.6	3.8	0.8	0.8	0.0	6.6	6.4	0.3	No
San Timoteo Canyon Rd.	2	11,700	41.3	40.1	1.1	111.4	107.6	3.8	29.8	28.6	1.2	10.7	10.3	0.4	No
Alessandro Rd.	2	290	41.3	40.1	1.1	111.4	107.6	3.8	0.5	0.5	0.0	6.6	6.3	0.3	No
San Bernardino-Riverside County Line MP 549.25															
Live Oak Canyon Rd.	2	1,100	41.3	40.1	1.1	111.4	107.6	3.8	2.0	2.0	0.1	6.7	6.5	0.3	No
San Timoteo Canyon Rd.	2	1,430	41.3	40.1	1.1	111.4	107.6	3.8	2.7	2.6	0.1	6.8	6.5	0.3	No
Viele Ave.	2	110	41.3	40.1	1.1	94.1	90.9	3.2	0.1	0.1	0.0	4.7	4.5	0.2	No
California Ave.	2	6,600	41.3	40.1	1.1	94.1	90.9	3.2	9.8	9.4	0.4	5.7	5.5	0.2	No
Pennsylvania Ave.	2	8,180	41.3	40.1	1.1	94.1	90.9	3.2	12.7	12.1	0.5	6.0	5.8	0.2	No
North Sunset Ave.	2	3,810	41.3	40.1	1.1	94.1	90.9	3.2	5.3	5.1	0.2	5.2	5.0	0.2	No
22nd St.	4	15,470	41.3	40.1	1.1	94.3	91.1	3.2	23.8	22.8	1.0	6.0	5.7	0.2	No
San Gorgonio Ave.	2	12,800	41.3	40.1	1.1	94.1	90.9	3.2	22.5	21.6	0.9	7.3	7.0	0.3	No
Hargrave St.	2	16,650	41.3	40.1	1.1	94.1	90.9	3.2	33.3	32.0	1.3	8.8	8.4	0.4	No
Apache Trail	2	2,530	41.3	40.1	1.1	94.1	90.9	3.2	3.4	3.3	0.1	5.0	4.8	0.2	No
Broadway	2	6,670	41.3	40.1	1.1	94.1	90.9	3.2	9.9	9.5	0.4	5.7	5.5	0.2	No
Tipton Rd.	2	120	41.3	40.1	1.1	94.1	90.9	3.2	0.2	0.1	0.0	4.7	4.5	0.2	No
Garnet MP 588.32															
West Indio MP 609.63															

Table 3.7-31: UP Yuma Subdivision from Colton Crossing to Indio, 2012 Baseline Plus Proposed Project

Boundary/Junction–Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)			Daily Total Gate Down Time (Minutes/Day)			Daily Total Vehicle Hours of Delay (Vehicle-Hours/Day)			P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)			Significant Impacts?
			W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	W/ Proj	W/O Proj	Change	
Indio MP 610.9															
Avenue 52	4	10,980	41.3	40.1	1.1	94.3	91.1	3.2	16.0	15.4	0.6	5.5	5.3	0.2	No
Avenue 56/Airport Blvd	2	4,790	41.3	40.1	1.1	94.1	90.9	3.2	6.8	6.6	0.3	5.4	5.2	0.2	No
Avenue 66/4th Street	2	7,840	41.3	40.1	1.1	94.1	90.9	3.2	12.0	11.5	0.5	6.0	5.7	0.2	No
OVERALL															None
Total Daily Vehicle Hours of Delay (Vehicle-Hours/Day)									213.2	204.6	8.6				
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)												6.8	6.6	0.3	

Impact TRANS-6: The proposed Project would not result in inadequate emergency access.

The proposed Project would not result in any roadway closures or otherwise obstruct access to the proposed project site or other areas within the Port. Additionally, none of the roadway segments or intersections within the proposed project study area would be significantly impacted as a result of the proposed Project. Section 3.13, Public Services, provides additional details on the emergency services that serve the proposed project area, and the locations of these public service providers' facilities are shown on Figure 3.13-1.

As discussed in Section 3.13, the Los Angeles Fire Department (LAFD) facilities nearby include fireboat companies in addition to land-based fire stations. For the proposed project area, Station 40 (approximately 0.5 mile southwest of the proposed project site) would be the primary responding fire station, and Station 49 (approximately 1.0 mile northeast of the proposed project site on the other side of the harbor) would be the secondary responding fire station. According to LAFD, the current level of service in the proposed project area is considered adequate.

Additionally, the Port Police and Los Angeles Police Department (LAPD) provide police protection for the proposed project area. The Port Police Headquarters office building is located directly west of the Harbor Administration Building at 330 South Centre Street in San Pedro, approximately 4.9 driving miles from the proposed project site. Waterside support would be provided by the police dock at Berth 84, on Mormon Island less than one mile north of the proposed project site. There is a Wilmington substation at 300 Water Street near Berth 195, and a Port Police training facility at 300 Ferry Street (2.9 driving miles from the project site). Dive Unit facility boats and offices/lockers are located at 954 South Seaside Avenue on Terminal Island. The Dive Unit also responds to waterside incidents and emergencies. The average response time by Port Police to the proposed project site falls within the acceptable response times. The LAPD Harbor Community station at 2175 John S. Gibson Boulevard would serve the proposed project site, if needed. Response time in the Harbor Division Area is considered adequate.

The U.S. Coast Guard (USCG) provides additional emergency-response duties related to maritime safety, maritime law enforcement, maritime mobility, national defense, and homeland security. USCG maintains a post in the Port on Terminal Island. Response time to a call from the proposed project area would be well within USCG policy goals.

CEQA Impact Determination

Access to the site by land and water would be maintained throughout construction and operation of the proposed Project, and none of the study intersections would be significantly impacted by the proposed Project. Therefore, no impacts to emergency access would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Access to the site by land and water would be maintained throughout construction and operation of the proposed Project, and none of the study intersections would be significantly impacted by the proposed Project. Therefore, no impacts to emergency access would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 1 – No Project

Under Alternative 1, none of the proposed construction activities would occur in water or in water-side or backland areas. LAHD would not implement any terminal improvements. No new cranes would be added and no dredging would occur. The No Project Alternative would not include the 100-foot gauge crane rail extension, expansion of the TICTF on-dock rail yard, or backland repairs.

Under the No Project Alternative, the existing YTI Terminal would continue to operate as an approximately 185-acre container terminal. Based on the Port's throughput projections, the YTI Terminal is expected to operate at its capacity of approximately 1,692,000 TEUs in 2026. Consequently, the capacity is the same as that for the NEPA Baseline. Since the trip generation of the terminal is dependent on TEU throughput and terminal operating parameters, Alternative 1 would result in the same trip generation and traffic conditions as the NEPA Baseline.

The No Project Alternative would not preclude future improvements to the YTI Terminal; however, any change in use or new improvements with the potential to significantly impact the environment would be analyzed in a separate environmental document in accordance with CEQA and/or NEPA.

Impact TRANS-1: Alternative 1 construction would not result in a significant short-term, temporary increase in truck and auto traffic.

Under the No Project Alternative, no LAHD or federal action would occur. LAHD would not construct and develop additional backlands or terminal improvements. Therefore, under the No Project Alternative, there would be no impacts on traffic related to construction.

CEQA Impact Determination

Because no construction would occur, there would be no impacts on traffic related to construction under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 1 would not significantly impact a study location's volume/capacity ratios or level of service.

Under the No Project Alternative, no LAHD or federal action would occur. LAHD would not construct and develop additional backlands or terminal improvements, but the existing terminal would continue to operate.

CEQA Impact Determination

Table 3.7-18 (above) summarizes the trip generation for the CEQA baseline and No Project Alternative (2026 without Project). Traffic generated by the No Project Alternative was estimated to determine potential impacts of this alternative on study area roadways.

Table 3.7-32 summarizes the CEQA baseline and the No Project Alternative intersection operating conditions at each study intersection. The CEQA baseline and the No Project Alternative intersection operating conditions for each year were compared to determine the impact of this alternative, and then the impacts were assessed using the appropriate city's criteria for significant impacts.

Based on the results of the traffic study as presented in Table 3.7-32, the No Project Alternative would not result in significant circulation system impacts relative to CEQA baseline conditions.

Mitigation Measures

Mitigation measures are not required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact TRANS-3: Alternative 1 would not cause a significant increase in related public transit use resulting from an increase in on-site employees.

The increase in use of public transit for work-related trips would be negligible. Intermodal facilities generate extremely low transit demand for several reasons. The primary reason that terminal workers generally would not use public transit is their work shift schedule. Most workers prefer to use a personal automobile to facilitate timely commuting. Also, Port workers' incomes are generally higher than similarly skilled jobs in other areas, and higher incomes correlate to lower transit usage. In addition, parking at the Port is readily available and free for employees, which encourages workers to drive to work. Finally, although there are 13 existing transit routes that serve the general area surrounding the proposed project site, none of the existing routes stop within 1 mile of the proposed site.

CEQA Impact Determination

Because the increase in use of public transit for work-related trips would be negligible and demand would be low, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Table 3.7-32: Intersection Level of Service Analysis—CEQA Baseline Compared to Alternative 1 (No Project)

#	Study Intersection	2012 CEQA Baseline						2026 No Project						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
		LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay						
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	A	0.399	A	0.439	A	0.533	A	0.418	A	0.442	A	0.533	0.019	0.003	0.000	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	A	0.586	A	0.492	B	0.644	A	0.587	A	0.492	B	0.644	0.001	0.000	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.402	A	0.407	A	0.453	A	0.407	A	0.409	A	0.454	0.005	0.002	0.001	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [2]	A	0.270	A	0.280	A	0.382	A	0.289	A	0.281	A	0.383	0.019	0.001	0.001	No	No	No
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.395	A	0.356	A	0.454	A	0.395	A	0.356	A	0.454	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [2]	A	0.061	A	0.175	A	0.223	A	0.094	A	0.177	A	0.224	0.033	0.002	0.001	No	No	No
7	Henry Ford Avenue / Anaheim Street [2]	A	0.296	A	0.423	A	0.544	A	0.333	A	0.426	A	0.549	0.037	0.003	0.005	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	A	0.080	A	0.141	A	0.173	A	0.132	A	0.158	A	0.180	0.052	0.017	0.007	No	No	No
9	Navy Way / Seaside Avenue [2]	A	0.387	A	0.332	A	0.575	A	0.401	A	0.335	A	0.576	0.014	0.003	0.001	No	No	No
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.457	A	0.495	B	0.631	A	0.463	A	0.496	B	0.631	0.006	0.001	0.000	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	B	10.5	A	9.1	B	10.0	B	13.7	A	9.3	B	10.3	3.2	0.2	0.3	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	A	7.0	A	7.3	A	7.6	A	7.5	A	7.3	A	7.7	0.5	0.0	0.1	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [3]	A	0.305	A	0.369	A	0.349	A	0.323	A	0.378	A	0.353	0.018	0.009	0.004	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [3]	A	0.246	A	0.358	A	0.375	A	0.246	A	0.358	A	0.375	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [3]	A	0.309	A	0.387	A	0.362	A	0.396	A	0.412	A	0.384	0.087	0.025	0.022	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [3]	A	0.284	A	0.315	A	0.346	A	0.327	A	0.317	A	0.368	0.043	0.002	0.022	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [3]	A	0.236	A	0.358	A	0.355	A	0.253	A	0.360	A	0.357	0.017	0.002	0.002	No	No	No

Notes:
[1] City of Carson intersection analyzed using ICU methodology according to City standards.
[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[4] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

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Impact TRANS-4: Alternative 1 operations would not significantly increase freeway congestion.

A traffic impact analysis is required at the following locations, according to the CMP, TIA Guidelines (Metro 2010):

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the proposed Project would add 50 or more trips during either the A.M. or P.M. weekday peak hours; and
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the A.M. or P.M. weekday peak hours.

CEQA Impact Determination

Tables 3.7-33 and 3.7-34 summarize the change to freeway analysis locations under the No Project Alternative compared to CEQA baseline conditions during A.M. and P.M. peak hours, respectively. The results of the analysis indicate that the No Project Alternative would not cause an increase of 0.02 or more in the D/C ratio at any of the CMP freeway monitoring locations and/or freeway analysis links that results in LOS F; therefore, no further freeway system analysis is required at those locations.

The analysis shows that the No Project alternative would not result in a significant traffic impact under CEQA relative to the CEQA baseline conditions.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact TRANS-5: Alternative 1 operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.

Based on the analysis of 2026 Project trains, rail delays at at-grade crossings east of the Alameda Corridor would not exceed the thresholds of significance. Alternative 1 would result in fewer throughput than the proposed Project and, therefore, similar daily train trips.

CEQA Impact Determination

Because the proposed Project would not result in a significant impact on grade crossing delays, neither would Alternative 1 under CEQA. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Table 3.7-33: CEQA Baseline Compared to Alternative 1 (No Project) Freeway Analysis—A.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				2026 No Project						2012 CEQA Baseline				2026 No Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	8,916	45.9	F	0.95	8,924	46.0	F	0.95	0.00	No	7,291	31.8	D	-	7,321	32	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,4009, 400	8,929	46.1	F	0.95	8,949	46.3	F	0.95	0.00	No	8,227	38.9	E	0.88	8,261	39.2	E	0.88	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	7,619	25.2	C	-	7,676	25.4	C	-	-	No	9,832	35.9	E	0.84	9,915	36.5	E	0.84	0.01	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,104	34.5	D	-	7,181	34.9	D	-	-	No	8,002	40.7	E	0.89	8,097	41.5	E	0.90	0.01	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,943	40.0	E	0.88	5,998	40.6	E	0.89	0.01	No	6,759	51.9	F	1.00	6,836	53.4	F	1.01	0.01	No
#6 I-110	South of C Street (CMP monitoring station—south of “C” St)	9,400	4,598	18.8	C	-	4,643	19.0	C	-	-	No	3,284	13.4	B	-	3,317	13.6	B	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,829	21.4	C	-	7,829	21.4	C	-	-	No	9,841	27.6	D	-	9,841	27.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	11,854	53.5	F	1.01	11,854	53.5	F	1.01	0.00	No	7,526	24.8	C	-	7,526	24.8	C	-	-	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,466	23.9	C	-	2,523	24.4	C	-	-	No	2,199	21.3	C	-	2,259	21.9	C	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	382	2.5	A	-	581	3.7	A	-	-	No	681	4.4	A	-	963	6.2	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Table 3.7-34: CEQA Baseline Compared to Alternative 1 (No Project) Freeway Analysis—P.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				2026 No Project						2012 CEQA Baseline				2026 No Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	7,264	31.7	D	-	7,264	31.7	D	-	-	No	8,122	38.0	E	0.86	8,127	38.1	E	0.86	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,003	37.0	E	0.85	8,003	37.0	E	0.85	0.00	No	8,739	43.9	E	0.93	8,745	44.0	E	0.93	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	8,768	30.1	D	-	8,772	30.1	D	-	-	No	7,808	25.9	C	-	7,826	26.0	C	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,699	38.3	E	0.86	7,712	38.4	E	0.86	0.00	No	7,021	34.0	D	-	7,041	34.1	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,724	37.8	E	0.85	5,725	37.8	E	0.85	0.00	No	6,148	42.4	E	0.91	6,165	42.6	E	0.91	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of “C” St)	9,400	3,127	12.8	B	-	3,136	12.8	B	-	-	No	4,575	18.7	C	-	4,582	18.8	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	9,129	25.2	C	-	9,129	25.2	C	-	-	No	7,082	19.3	C	-	7,082	19.3	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,238	32.5	D	-	9,238	32.5	D	-	-	No	11,313	47.5	F	0.96	11,313	47.5	F	0.96	0.00	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,690	26.0	D	-	2,698	26.1	D	-	-	No	3,015	29.2	D	-	3,050	29.5	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	1,021	6.6	A	-	1,066	6.9	A	-	-	No	791	5.1	A	-	821	5.3	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Impact TRANS-6: Alternative 1 would not result in inadequate emergency access.

Under the No Project Alternative, LAHD would not construct and develop additional backlands or terminal improvements. Therefore, under the No Project Alternative, there would be no impacts on traffic related to construction. However, the existing terminal would continue to operate and would increase container throughput over time. Additionally, Alternative 1 would not result in any roadway closures or otherwise obstruct access to the proposed project site or other areas within the Port for emergency service responders.

CEQA Impact Determination

No construction would occur that could affect emergency access under Alternative 1. Access to the site by land and water would be maintained throughout operation under this alternative, and none of the study intersections would be significantly impacted by implementation of Alternative 1. Therefore, no impacts on emergency access would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Alternative 2 – No Federal Action

Alternative 2 is a NEPA-required no-federal action alternative for purposes of this Draft EIS/EIR. This alternative includes the activities that would occur absent a USACE permit and could include improvements that require a local permit. Absent a USACE permit, no dredging, dredged material disposal, in-water pile installation, or crane installation/extension would occur. Expansion of the TICTF and extension of the crane rail also would not occur. The No Federal Action alternative includes only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. These activities would not change the capacity of the existing terminal.

As discussed above, Alternative 2 would have the same annual terminal throughput of 1,692,000 TEUs as Alternative 1 and the NEPA Baseline. Since the trip generation of the terminal is dependent on TEU throughput and terminal operating parameters, Alternative 2 would result in the same trip generation and traffic conditions as Alternative 1 and the NEPA Baseline.

Impact TRANS-1: Alternative 2 construction would not result in a short-term, temporary increase in truck and auto traffic.

Under the No Federal Action Alternative, LAHD would improve the backlands area, which would generate construction traffic. Construction activities could result in temporary increases in traffic volumes and roadway disruptions in the vicinity of a construction site. The types of impacts would be similar to those identified for the proposed Project, but at a lower magnitude due to less construction activities. Similar to the proposed Project, a detailed traffic management plan would be required under this alternative to minimize potential hazards and disruptions.

CEQA Impact Determination

Given that most of the traffic associated with construction would occur outside of the peak periods, and that a detailed traffic management plan would be prepared and implemented, Alternative 2 would not result in a significant short-term, temporary increase in truck and auto traffic. Therefore, under the No Federal Action Alternative, there would be no significant impacts on traffic related to construction under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 2 would not significantly impact a study location's volume/capacity ratios or level of service.

Under the No Federal Action Alternative, only backlands improvements would occur. The existing terminal would continue to operate without any change in the capacity of the existing terminal. However, throughput would increase over time up to the existing maximum capacity. Transportation impacts associated with Alternative 2 are equivalent to the 2026 No Project conditions.

CEQA Impact Determination

Table 3.7-18 (above) summarizes the trip generation for the CEQA baseline and No Federal Action Alternative (2026 No Project). Traffic generated by the No Federal Action Alternative was estimated to determine potential impacts of this alternative on study area roadways.

Table 3.7-35 summarizes the CEQA baseline and the No Federal Action Alternative intersection operating conditions at each study intersection. The CEQA baseline and the No Federal Action Alternative intersection operating conditions were compared to determine the impact of this alternative, and then the impacts were assessed using the appropriate city's criteria for significant impacts.

Based on the results of the traffic study as presented in Table 3.7-35 the No Federal Action Alternative would not result in significant circulation system impacts at a study intersection, relative to CEQA baseline conditions.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact TRANS-3: Alternative 2 operations would not cause a significant increase in related public transit use resulting from an increase in on-site employees.

The increase in use of public transit for work-related trips would be negligible under this alternative. As described for the proposed Project, intermodal facilities generate extremely low transit demand.

CEQA Impact Determination

Because the increase in use of public transit for work-related trips would be negligible and demand would be low, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Table 3.7-35: Intersection Level of Service Analysis—CEQA Baseline Compared to Alternative 2 (No Federal Action)

		2012 CEQA Baseline						No Federal Action Alternative (2026)						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak							
#	Study Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	A	0.399	A	0.439	A	0.533	A	0.418	A	0.442	A	0.533	0.019	0.003	0.000	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	A	0.586	A	0.492	B	0.644	A	0.587	A	0.492	B	0.644	0.001	0.000	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.402	A	0.407	A	0.453	A	0.407	A	0.409	A	0.454	0.005	0.002	0.001	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [2]	A	0.270	A	0.280	A	0.382	A	0.289	A	0.281	A	0.383	0.019	0.001	0.001	No	No	No
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.395	A	0.356	A	0.454	A	0.395	A	0.356	A	0.454	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [2]	A	0.061	A	0.175	A	0.223	A	0.094	A	0.177	A	0.224	0.033	0.002	0.001	No	No	No
7	Henry Ford Avenue / Anaheim Street [2]	A	0.296	A	0.423	A	0.544	A	0.333	A	0.426	A	0.549	0.037	0.003	0.005	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	A	0.080	A	0.141	A	0.173	A	0.132	A	0.158	A	0.180	0.052	0.017	0.007	No	No	No
9	Navy Way / Seaside Avenue [2]	A	0.387	A	0.332	A	0.575	A	0.401	A	0.335	A	0.576	0.014	0.003	0.001	No	No	No
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.457	A	0.495	B	0.631	A	0.463	A	0.496	B	0.631	0.006	0.001	0.000	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	B	10.5	A	9.1	B	10.0	B	13.7	A	9.3	B	10.3	3.2	0.2	0.3	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	A	7.0	A	7.3	A	7.6	A	7.5	A	7.3	A	7.7	0.5	0.0	0.1	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [3]	A	0.305	A	0.369	A	0.349	A	0.323	A	0.378	A	0.353	0.018	0.009	0.004	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [3]	A	0.246	A	0.358	A	0.375	A	0.246	A	0.358	A	0.375	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [3]	A	0.309	A	0.387	A	0.362	A	0.396	A	0.412	A	0.384	0.087	0.025	0.022	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [3]	A	0.284	A	0.315	A	0.346	A	0.327	A	0.317	A	0.368	0.043	0.002	0.022	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [3]	A	0.236	A	0.358	A	0.355	A	0.253	A	0.360	A	0.357	0.017	0.002	0.002	No	No	No

Notes:
[1] City of Carson intersection analyzed using ICU methodology according to City standards.
[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[4] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

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Impact TRANS-4: Alternative 2 operations would not significantly increase freeway congestion.

A traffic impact analysis is required at the following locations, according to the CMP, TIA Guidelines (Metro 2010):

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the proposed Project would add 50 or more trips during either the A.M. or P.M. weekday peak hours; and
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the A.M. or P.M. weekday peak hours.

CEQA Impact Determination

Tables 3.7-36 and 3.7-37 summarize the change to freeway monitoring locations under the No Federal Action Alternative in comparison to the CEQA baseline conditions during A.M. and P.M. peak hours, respectively. The results of the analysis indicate that Alternative 2 would not cause an increase of 0.02 or more in the D/C ratio at any of the CMP freeway monitoring locations and/or freeway analysis links that results in LOS F; therefore, no further freeway system analysis is required at those locations.

The analysis shows that the No Federal Action Alternative would not result in a significant traffic impact under CEQA relative to the CEQA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact TRANS-5: Alternative 2 operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.

Based on the analysis of 2026 Project Trains, rail delays at at-grade crossings east of the Alameda Corridor would not exceed the thresholds of significance. Alternative 2 would result in less annual throughput than the proposed Project and, therefore, fewer daily train trips.

CEQA Impact Determination

Because Alternative 2 would result in less annual throughput than the proposed Project and, therefore, fewer daily train trips, impacts on grade crossing delays would not be significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Because there are no at-grade railroad crossings between the proposed project site and the greater Los Angeles intermodal railyards (i.e., BNSF's Hobart yard, UP's ELA), there are no rail-related at-grade impacts in this area. As such, impacts beyond these railyard locations are outside of the NEPA/federal scope of analysis and therefore not evaluated under NEPA. Because potential vehicle delay impacts at at-grade railroad crossings beyond these geographical limits fall outside of the Federal Scope of Analysis (see Section 2.7), no impact determination under NEPA is required.

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Table 3.7-36: CEQA Baseline Compared to Alternative 2 (No Federal Action) Freeway Analysis—A.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				No Federal Action Alternative (2026)						2012 CEQA Baseline				No Federal Action Alternative (2026)					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	8,916	45.9	F	0.95	8,924	46.0	F	0.95	0.00	No	7,291	31.8	D	-	7,321	32	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,929	46.1	F	0.95	8,949	46.3	F	0.95	0.00	No	8,227	38.9	E	0.88	8,261	39.2	E	0.88	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	7,619	25.2	C	-	7,676	25.4	C	-	-	No	9,832	35.9	E	0.84	9,915	36.5	E	0.84	0.01	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,104	34.5	D	-	7,181	34.9	D	-	-	No	8,002	40.7	E	0.89	8,097	41.5	E	0.90	0.01	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,943	40.0	E	0.88	5,998	40.6	E	0.89	0.01	No	6,759	51.9	F	1.00	6,836	53.4	F	1.01	0.01	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	4,598	18.8	C	-	4,643	19.0	C	-	-	No	3,284	13.4	B	-	3,317	13.6	B	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,829	21.4	C	-	7,829	21.4	C	-	-	No	9,841	27.6	D	-	9,841	27.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	11,854	53.5	F	1.01	11,854	53.5	F	1.01	0.00	No	7,526	24.8	C	-	7,526	24.8	C	-	-	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,466	23.9	C	-	2,523	24.4	C	-	-	No	2,199	21.3	C	-	2,259	21.9	C	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	442	2.9	A	-	581	3.7	A	-	-	No	756	4.9	A	-	963	6.2	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Table 3.7-37: CEQA Baseline Compared to Alternative 2 (No Federal Action) Freeway Analysis—P.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				No Federal Action Alternative (2026)						2012 CEQA Baseline				No Federal Action Alternative (2026)					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	7,264	31.7	D	-	7,264	31.7	D	-	-	No	8,122	38.0	E	0.86	8,127	38.1	E	0.86	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,003	37.0	E	0.85	8,003	37.0	E	0.85	0.00	No	8,739	43.9	E	0.93	8,745	44.0	E	0.93	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	8,768	30.1	D	-	8,772	30.1	D	-	-	No	7,808	25.9	C	-	7,826	26.0	C	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,699	38.3	E	0.86	7,712	38.4	E	0.86	0.00	No	7,021	34.0	D	-	7,041	34.1	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,724	37.8	E	0.85	5,725	37.8	E	0.85	0.00	No	6,148	42.4	E	0.91	6,165	42.6	E	0.91	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of “C” St)	9,400	3,127	12.8	B	-	3,136	12.8	B	-	-	No	4,575	18.7	C	-	4,582	18.8	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	9,129	25.2	C	-	9,129	25.2	C	-	-	No	7,082	19.3	C	-	7,082	19.3	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,238	32.5	D	-	9,238	32.5	D	-	-	No	11,313	47.5	F	0.96	11,313	47.5	F	0.96	0.00	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,690	26.0	D	-	2,698	26.1	D	-	-	No	3,015	29.2	D	-	3,050	29.5	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	1,021	6.6	A	-	1,066	6.9	A	-	-	No	791	5.1	A	-	821	5.3	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Impact TRANS-6: Alternative 2 would not result in inadequate emergency access.

Under the No Federal Action Alternative, only backlands improvements would occur. The existing terminal would continue to operate without any change in the capacity of the existing terminal. However, throughput would increase over time up to the existing maximum capacity. Based on the results of the traffic analysis, Alternative 2 would not result in significant circulation system impacts. Additionally, Alternative 2 would not result in any roadway closures or otherwise obstruct access to the proposed project site or other areas within the Port for emergency service responders.

CEQA Impact Determination

Access to the site by land and water would be maintained throughout construction and operation under this alternative, and none of the study intersections would be significantly impacted by implementation of Alternative 2. Therefore, no impacts to emergency access would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 3 – Reduced Project: Improve Berths 217–220 Only

This alternative includes improving Berths 217–220, extending the crane rail, expanding the TICTF on-dock rail facility, and repairing and improving the backlands. The following components of the proposed Project would be unchanged under the Reduced Project Alternative:

- modifying up to six existing cranes;
- replacing up to four existing non-operating cranes;

- dredging 6,000 cy of material from a depth of -45 to -47 feet MLLW (with an additional two feet of overdredge depth, for a total depth of -49 feet MLLW), and installing 1,200 linear feet of sheet piles and king piles to support and stabilize the existing wharf structure at Berths 217–220;
- disposing of dredged material at LA-2, the Berths 243–245 CDF or another approved upland location;
- extending the existing 100-foot gauge landside crane rail through Berths 217–220;
- performing ground repairs and maintenance activities in the backlands area; and
- expanding the TICTF on-dock rail by adding a single rail loading track.

Under this alternative, there would be three operating berths after construction, similar to the proposed Project, but Berths 214–216 would remain at their existing depth. This alternative would require less dredging (by approximately 21,000 cy) and pile driving and a shorter construction period than the proposed Project. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 1,913,000 TEUs by 2026, similar to the proposed Project. However, while the terminal could handle similar levels of cargo, the reduced project alternative would not achieve the same level of efficient operations as achieved by the proposed Project. This alternative would not accommodate the largest vessels (13,000 TEUs). The depth achieved at Berths 217–220 would only be capable of handling vessels up to 11,000 TEUs, requiring additional vessels to call on the terminal to meet future growth projections up to the capacity of the terminal. Therefore, under this alternative, 232 vessels would call on the terminal in 2020 and 2026, compared to 206 vessels for the proposed Project. Additionally, because of the higher number of annual vessel calls, this alternative would result in a maximum of five peak day ship calls (over a 24-hour period) compared to four for the proposed Project.

As discussed above, the proposed Project and Alternative 3 would have the same annual terminal throughput of 1,913,000 TEUs. Since the trip generation of the terminal is dependent on TEU throughput and terminal operating parameters, the proposed Project and Alternative 3 would result in the same trip generation; consequently, traffic conditions for these two scenarios would operationally be the same.

Impact TRANS-1: Alternative 3 construction would not result in a short-term, temporary increase in truck and auto traffic.

The proposed construction activities for Alternative 3 are similar to those for the proposed Project. Construction activities could result in temporary increases in traffic volumes and roadway disruptions in the vicinity of the construction areas.

CEQA Impact Determination

Given that most of the traffic associated with construction would occur outside of the peak periods, and that a detailed traffic management plan would be prepared and implemented, the proposed Project would not result in a significant short-term, temporary increase in truck and auto traffic. Impacts for Alternative 3 would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Given that most of the traffic associated with construction would occur outside of the peak periods, and that a detailed traffic management plan would be prepared and implemented, the proposed Project would not result in a significant short-term, temporary increase in truck and auto traffic.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 3 would not significantly impact a study location's volume/capacity ratio or level of service.

Traffic conditions with Alternative 3 were compared to the applicable baseline to determine the proposed Project's incremental impacts, and then the incremental impacts were assessed using the significance criteria described in Section 3.7.4.5.

CEQA Impact Determination

Table 3.7-18 (above) summarizes the trip generation for the CEQA baseline and Alternative 3. Traffic conditions with Alternative 3 were estimated by adding traffic resulting from the improved container terminal and associated throughput growth to the CEQA baseline.

Appendix D contains all of the CEQA baseline, NEPA baseline, and future with-project traffic forecasts and LOS calculation worksheets.

Table 3.7-38 summarizes the CEQA baseline plus Alternative 3 intersection operating conditions at each study intersection. The CEQA baseline and with-project intersection operating conditions were compared to determine the Alternative 3 regional impacts, and then the impacts were assessed using the appropriate significance criteria described in Section 3.7.4.5.

Based on the results of the traffic study as presented in Table 3.7-38 and worksheets set forth in Appendix D, Alternative 3 would not result in significant circulation system impacts at any study intersection relative to CEQA baseline conditions.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant

NEPA Impact Determination

Traffic conditions with Alternative 3 for the year 2012 were estimated by adding traffic resulting from the improved container terminal and associated throughput growth to the NEPA baseline. The evaluation assumptions described under TRANS-2 would apply.

Table 3.7-18 summarizes the trip generation for the NEPA baseline (2026 No Project) and Alternative 3 (2026 with proposed Project) because Alternative 3 would result in the same throughput and therefore the same traffic as the proposed Project. Table 3.7-39 summarizes the NEPA baseline and Alternative 3 intersection operating conditions at each study intersection.

As shown in Tables 3.7-18 and 3.7-39, Alternative 3 would not result in significant circulation system impacts at any study intersection relative to NEPA baseline conditions.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Table 3.7-38: Intersection Level of Service Analysis—CEQA Baseline Compared to Alternative 3 (Reduced Project: Improve Berths 217–220 Only)

		2012 CEQA Baseline						2026 Reduced Project (Improve Berths 217–220 Only)						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak							
#	Study Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	A	0.399	A	0.439	A	0.533	A	0.423	A	0.443	A	0.534	0.024	0.004	0.001	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	A	0.586	A	0.492	B	0.644	A	0.587	A	0.492	B	0.644	0.001	0.000	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.402	A	0.407	A	0.453	A	0.409	A	0.409	A	0.455	0.007	0.002	0.002	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [2]	A	0.270	A	0.280	A	0.382	A	0.293	A	0.283	A	0.385	0.023	0.003	0.003	No	No	No
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.395	A	0.356	A	0.454	A	0.395	A	0.356	A	0.454	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [2]	A	0.061	A	0.175	A	0.223	A	0.099	A	0.181	A	0.226	0.038	0.006	0.003	No	No	No
7	Henry Ford Avenue / Anaheim Street [2]	A	0.296	A	0.423	A	0.544	A	0.342	A	0.428	A	0.552	0.046	0.005	0.008	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	A	0.080	A	0.141	A	0.173	A	0.141	A	0.163	A	0.184	0.061	0.022	0.011	No	No	No
9	Navy Way / Seaside Avenue [2]	A	0.387	A	0.332	A	0.575	A	0.404	A	0.337	A	0.578	0.017	0.005	0.003	No	No	No
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.457	A	0.495	B	0.631	A	0.465	A	0.496	B	0.631	0.008	0.001	0.000	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	B	10.5	A	9.1	B	10.0	B	14.6	A	9.4	B	10.5	4.1	0.3	0.5	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	A	7.0	A	7.3	A	7.6	A	7.6	A	7.4	A	7.8	0.6	0.1	0.2	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [3]	A	0.305	A	0.369	A	0.349	A	0.327	A	0.381	A	0.354	0.022	0.012	0.005	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [3]	A	0.246	A	0.358	A	0.375	A	0.246	A	0.358	A	0.375	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [3]	A	0.309	A	0.387	A	0.362	A	0.412	A	0.424	A	0.394	0.103	0.037	0.032	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [3]	A	0.284	A	0.315	A	0.346	A	0.334	A	0.319	A	0.378	0.050	0.004	0.032	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [3]	A	0.236	A	0.358	A	0.355	A	0.257	A	0.363	A	0.359	0.021	0.005	0.004	No	No	No

Notes:
[1] City of Carson intersection analyzed using ICU methodology according to City standards.
[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[4] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

Table 3.7-39: Intersection Level of Service Analysis—2026 NEPA Baseline Compared to 2026 Alternative 3 (Reduced Project: Improve Berths 217–220 Only)

		2026 NEPA Baseline						2026 Reduced Project (Improve Berths 217–220 Only)						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak							
#	Study Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	D	0.848	B	0.604	B	0.673	D	0.850	B	0.606	B	0.674	0.002	0.002	0.001	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	C	0.735	A	0.525	C	0.720	C	0.738	A	0.526	C	0.720	0.003	0.001	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.580	A	0.570	A	0.462	A	0.582	A	0.571	A	0.462	0.002	0.001	0.000	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [2]	C	0.711	A	0.518	A	0.576	C	0.715	A	0.520	A	0.577	0.004	0.002	0.001	No	No	No
5	Alameda Street / PCH ramp (on PCH) [2]	A	0.473	A	0.466	A	0.551	A	0.473	A	0.466	A	0.551	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [2]	C	0.793	A	0.430	A	0.447	C	0.799	A	0.433	A	0.449	0.006	0.003	0.002	No	No	No
7	Henry Ford Avenue / Anaheim Street [2]	F	1.071	D	0.844	D	0.819	F	1.080	D	0.849	D	0.822	0.009	0.005	0.003	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [2]	B	0.675	A	0.429	A	0.471	B	0.684	A	0.433	A	0.475	0.009	0.004	0.004	No	No	No
9	Navy Way / Seaside Avenue [2]	N/A																	
10	Terminal Island Freeway (SR-103) / Willow Street [3]	A	0.526	A	0.470	B	0.694	A	0.527	A	0.471	B	0.696	0.001	0.001	0.002	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [4]	C	20.7	B	11.6	B	13.4	C	22.8	B	11.7	B	13.8	2.1	0.1	0.4	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [4]	C	15.2	B	11.0	B	12.3	C	17.6	B	11.2	B	12.6	2.4	0.2	0.3	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [3]	D	0.831	B	0.683	B	0.680	D	0.834	B	0.685	B	0.680	0.003	0.002	0.000	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [3]	F	1.058	D	0.820	C	0.774	F	1.058	D	0.820	C	0.774	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [3]	B	0.602	A	0.531	A	0.557	B	0.619	A	0.538	A	0.569	0.017	0.007	0.012	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [3]	D	0.816	B	0.636	C	0.716	D	0.824	B	0.643	C	0.725	0.008	0.007	0.009	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [3]	B	0.607	A	0.504	A	0.593	B	0.610	A	0.506	A	0.595	0.003	0.002	0.002	No	No	No

Notes:
[1] City of Carson intersection analyzed using ICU methodology according to City standards.
[2] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[3] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[4] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

Impact TRANS-3: Alternative 3 operations would not cause a significant increase in related public transit use resulting from an increase in on-site employees.

Although Alternative 3 would result in additional on-site employees, the increase in use of public transit for work-related trips would be negligible, as intermodal facilities generate extremely low transit demand, as described for the proposed Project.

CEQA Impact Determination

Based on the analysis above, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 3 would result in a slightly higher employment level compared to the NEPA baseline due to increased throughput operations, but as discussed above under the CEQA impacts discussion, the increase in use of public transit for work-related trips would be negligible. Less than significant impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact TRANS-4: Alternative 3 operations would not significantly increase freeway congestion.

A traffic impact analysis is required at the following locations, according to the CMP, TIA Guidelines (Metro 2010):

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the proposed Project would add 50 or more trips during either the A.M. or P.M. weekday peak hours; and
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the A.M. or P.M. weekday peak hours.

CEQA Impact Determination

Alternative 3 would result in additional truck trips on the surrounding freeway system. Tables 3.7-40 and 3.7-41 summarize the change to freeway monitoring locations during A.M. and P.M. peak hours, respectively due to Alternative 3.

The results of the analysis indicate that Alternative 3 would not cause an increase of 0.02 or more in the D/C ratio at any of the CMP freeway monitoring locations and/or freeway analysis links that result in LOS F under CEQA baseline and future CEQA baseline conditions; therefore, no further freeway system analysis is required at those locations.

Based on the above, traffic impacts on the freeway system would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 3 would result in additional truck trips on the surrounding freeway system. Tables 3.7-42 and 3.7-43 summarize the change to freeway monitoring locations during A.M. and P.M. peak hours, respectively due to Alternative 3.

The results of the analysis indicate that Alternative 3 would not cause an increase of 0.02 or more in the D/C ratio at any of the CMP freeway monitoring locations and/or freeway analysis links that result in LOS F; therefore, no further freeway system analysis is required at those locations. Consequently, traffic impacts on the freeway system would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Table 3.7-40: CEQA Baseline Compared to Alternative 3 (Reduced Project: Improve Berths 217–220 Only) Freeway Analysis—A.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)						2012 CEQA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	8,916	45.9	F	0.95	8,926	46.1	F	0.95	0.00	No	7,291	31.8	D	-	7,327	32.1	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,929	46.1	F	0.95	8,952	46.4	F	0.95	0.00	No	8,227	38.9	E	0.88	8,267	39.3	E	0.88	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	7,619	25.2	C	-	7,687	25.5	C	-	-	No	9,832	35.9	E	0.84	9,931	36.6	E	0.85	0.01	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,104	34.5	D	-	7,195	35.0	D	-	-	No	8,002	40.7	E	0.89	8,115	41.6	E	0.90	0.01	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,943	40.0	E	0.88	6,009	40.7	E	0.89	0.01	No	6,759	51.9	F	1.00	6,850	53.7	F	1.01	0.01	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	4,598	18.8	C	-	4,651	19.0	C	-	-	No	3,284	13.4	B	-	3,324	13.6	B	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,829	21.4	C	-	7,829	21.4	C	-	-	No	9,841	27.6	D	-	9,841	27.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	11,854	53.5	F	1.01	11,854	53.5	F	1.01	0.00	No	7,526	24.8	C	-	7,526	24.8	C	-	-	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,466	23.9	C	-	2,533	24.5	C	-	-	No	2,199	21.3	C	-	2,270	21.9	C	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	442	2.9	A	-	608	3.9	A	-	-	No	756	4.9	A	-	1,001	6.5	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Table 3.7-41: CEQA Baseline Compared to Alternative 3 (Reduced Project: Improve Berths 217–220 Only) Freeway Analysis—P.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2012 CEQA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)						2012 CEQA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	7,264	31.7	D	-	7,265	31.7	D	-	-	No	8,122	38.0	E	0.86	8,128	38.1	E	0.86	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,003	37.0	E	0.85	8,005	37.0	E	0.85	0.00	No	8,739	43.9	E	0.93	8,746	44.0	E	0.93	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	8,768	30.1	D	-	8,777	30.2	D	-	-	No	7,808	25.9	C	-	7,831	26.0	C	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	7,699	38.3	E	0.86	7,721	38.4	E	0.86	0.00	No	7,021	34.0	D	-	7,048	34.2	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	5,724	37.8	E	0.85	5,729	37.9	E	0.85	0.00	No	6,148	42.4	E	0.91	6,170	42.7	E	0.91	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of “C” St)	9,400	3,127	12.8	B	-	3,142	12.9	B	-	-	No	4,575	18.7	C	-	4,585	18.8	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	9,129	25.2	C	-	9,129	25.2	C	-	-	No	7,082	19.3	C	-	7,082	19.3	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,238	32.5	D	-	9,238	32.5	D	-	-	No	11,313	47.5	F	0.96	11,313	47.5	F	0.96	0.00	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	2,690	26.0	D	-	2,703	26.1	D	-	-	No	3,015	29.2	D	-	3,064	29.6	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	1,021	6.6	A	-	1,089	7.0	A	-	-	No	791	5.1	A	-	838	5.4	A	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

*Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Table 3.7-42: 2026 NEPA Baseline Compared to 2026 Alternative 3 (Reduced Project: Improve Berths 217–220 Only) Freeway Analysis—A.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2026 NEPA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)						2026 NEPA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	9,243	50.0	F	0.98	9,245	50.1	F	0.98	0.00	No	7,691	34.6	D	-	7,697	34.7	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	9,234	49.9	F	0.98	9,237	50.0	F	0.98	0.00	No	8,360	40.1	E	0.89	8,366	40.2	E	0.89	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	8,118	27.2	D	-	8,128	27.2	D	-	-	No	10,572	41.1	E	0.90	10,588	41.2	E	0.90	0.00	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	8,744	48.3	F	0.97	8,758	48.4	F	0.97	0.00	No	9,179	54.4	F	1.02	9,197	54.7	F	1.02	0.00	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	7,969	97.4	F	1.18	7,979	98.0	F	1.18	0.00	No	8,670	205.9	F	1.28	8,685	211.7	F	1.29	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	6,384	26.6	D	-	6,392	26.7	D	-	-	No	4,486	18.4	C	-	4,492	18.4	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	8,037	21.9	C	-	8,037	21.9	C	-	-	No	10,121	28.6	D	-	10,121	28.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	12,796	67.8	F	1.09	12,796	67.8	F	1.09	0.00	No	8,892	30.7	D	-	8,892	30.7	D	-	-	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	3,405	32.9	D	-	3,416	33.0	D	-	-	No	3,516	34.1	D	-	3,526	34.2	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	2,578	16.6	B	-	2,604	16.8	B	-	-	No	3,407	22.0	C	-	3,445	22.2	C	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Table 3.7-43: 2026 NEPA Baseline Compared to 2026 Alternative 3 (Reduced Project: Improve Berths 217–220 Only) Freeway Analysis—P.M. Peak

			Northbound / Eastbound										Southbound / Westbound									
			2026 NEPA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)						2026 NEPA Baseline				2026 Reduced Project (Improve Berths 217–220 Only)					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[1]	Vol	Density	LOS	D/C[1]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[2]	9,400	7,514	33.3	D	-	7,515	33.4	D	-	-	No	8,733	43.9	E	0.93	8,734	43.9	E	0.93	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,228	38.9	E	0.88	8,230	39.0	E	0.88	0.00	No	9,041	47.5	F	0.96	9,042	47.5	F	0.96	0.00	No
#3 I-710	Alondra Boulevard[2]	11,750	9,036	31.5	D	-	9,042	31.5	D	-	-	No	7,875	26.2	D	-	7,880	26.2	D	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	8,449	44.9	E	0.94	8,458	45.0	E	0.94	0.00	No	7,120	34.6	D	-	7,126	34.6	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	6,269	43.9	E	0.93	6,274	44.0	E	0.93	0.00	No	6,318	44.6	E	0.94	6,323	44.7	E	0.94	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	5,235	21.4	C	-	5,241	21.4	C	-	-	No	5,153	21.1	C	-	5,156	21.1	C	-	-	No
#7 SR-91	west of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,271	19.8	C	-	7,271	19.8	C	-	-	No	9,358	25.9	C	-	9,358	25.9	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,934	36.6	E	0.85	9,934	36.6	E	0.85	0.00	No	13,025	72.3	F	1.11	13,025	72.3	F	1.11	0.00	No
#9 SR-47	Vincent Thomas Bridge[2]	4,700	4,223	44.8	E	0.90	4,237	45.2	F	0.90	0.00	No	3,406	32.9	D	-	3,411	33.0	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[2]	6,750	2,281	14.7	B	-	2,304	14.9	B	-	-	No	1,928	12.4	B	-	1,945	12.5	B	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[1]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[2]Non-CMP location

Impact TRANS-5: Alternative 3 operations would not cause a significant impact in vehicular delay at railroad at-grade railroad crossings within the proposed project vicinity or in the region.

Alternative 3 would result in similar annual throughput as the proposed Project and, therefore, similar daily train trips. Based on the analysis of 2026 Project trains, rail delays at at-grade railroad crossings east of the Alameda Corridor would not exceed the thresholds of significance. In addition, as with the proposed Project, Alternative 3 is not expected to result in significant secondary impacts (i.e., related to air, noise, and public services) related to increased vehicular delay at at-grade railroad crossings.

CEQA Impact Determination

Because the proposed Project would not result in a significant impact on at-grade railroad crossing delays, neither would Alternative 3 under CEQA. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Because there are no at-grade railroad crossings between the proposed project site and the greater Los Angeles intermodal railyards (i.e., BNSF's Hobart yard, UP's ELA), there are no rail-related at-grade impacts in this area, and such impacts beyond these railyard locations are outside of the NEPA/federal scope of analysis and therefore not evaluated under NEPA. Because potential vehicle delay impacts at at-grade railroad crossings beyond these geographical limits fall outside of the Federal Scope of Analysis (see Section 2.8), no impact determination under NEPA is required.

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact TRANS-6: Alternative 3 would not result in inadequate emergency access.

Under Alternative 3, construction would occur and throughput would increase over time up to the same capacity as the proposed Project. Based on the results of the traffic analysis, Alternative 3 would not result in significant circulation system impacts. Additionally, Alternative 3 would not result in any roadway closures or otherwise obstruct access to the proposed project site or other areas within the Port for emergency service responders.

CEQA Impact Determination

Access to the site by land and water would be maintained throughout construction and operation of Alternative 3, and none of the study intersections would be significantly impacted by implementation of Alternative 3. Therefore, no impacts to emergency access would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Access to the site by land and water would be maintained throughout construction and operation of Alternative 3, and none of the study intersections would be significantly impacted. Therefore, no impacts to emergency access would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

3.7.4.8 Summary of Impact Determinations

The proposed Project and all alternatives evaluated in this study show that there would be no significant impacts at any of the analyzed intersections and freeway segments under both CEQA and NEPA impact determinations.

Table 3.7-44 summarizes the CEQA and NEPA impact determinations of the proposed Project and alternatives related to Ground Transportation, as described in the detailed discussion above. This table is meant to allow easy comparison between the impacts of the proposed Project and alternatives with respect to this resource. Identified potential impacts may be based on federal, state, or City significance criteria, Port criteria, and the scientific judgment of the report preparers.

For each impact threshold, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table.

Table 3.7-44: Summary Matrix of Potential Impacts and Mitigation Measures for Ground Transportation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Proposed Project	**TRANS-1:** Proposed Project construction would not result in a short-term, temporary increase in truck and auto traffic.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-2: Long-term vehicular traffic associated with the proposed Project would not significantly impact volume/capacity ratios or level of service.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-3: An increase in on-site employees due to proposed Project operations would not significantly increase public transit use.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-4: Proposed Project operations would not significantly increase freeway congestion.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-5: Proposed Project operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-6: The proposed Project would not result in inadequate emergency access.	CEQA: No Impact NEPA: No Impact	No mitigation is required.	CEQA: No Impact NEPA: No Impact

Table 3.7-44: Summary Matrix of Potential Impacts and Mitigation Measures for Ground Transportation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 1 – No Project	**TRANS-1:** Alternative 1 construction would not result in a short-term, temporary increase in truck and auto traffic.	CEQA: No Impact NEPA: Not applicable	No mitigation is required.	CEQA: No Impact NEPA: Not applicable
	TRANS-2: Long-term vehicular traffic associated with Alternative 1 would not significantly impact volume/capacity ratios or level of service.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-3: An increase in on-site employees due to Alternative 1 operations would not significantly increase public transit use.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-4: Alternative 1 operations would not significantly increase freeway congestion.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-5: Alternative 1 operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-6: Alternative 1 would not result in inadequate emergency access.	CEQA: No Impact NEPA: Not applicable	No mitigation is required.	CEQA: No Impact NEPA: Not applicable
Alternative 2 – No Federal Action	**TRANS-1:** Alternative 2 construction would not result in a short-term, temporary increase in truck and auto traffic.	CEQA: Less than significant NEPA: No Impact	No mitigation is required.	CEQA: Less than significant NEPA: No Impact
	TRANS-2: Long-term vehicular traffic associated with Alternative 2 would not significantly impact volume/capacity ratios or level of service.	CEQA: Less than significant NEPA: No Impact	No mitigation is required.	CEQA: Less than significant NEPA: No Impact
	TRANS-3: An increase in on-site employees due to Alternative 2 operations would not significantly increase public transit use.	CEQA: Less than significant NEPA: No Impact	No mitigation is required.	CEQA: Less than significant NEPA: No Impact
	TRANS-4: Alternative 2 operations would not significantly increase freeway congestion.	CEQA: Less than significant NEPA: No Impact	No mitigation is required.	CEQA: Less than significant NEPA: No Impact

Table 3.7-44: Summary Matrix of Potential Impacts and Mitigation Measures for Ground Transportation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
	TRANS-5: Alternative 2 operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-6: Alternative 2 would not result in inadequate emergency access.	CEQA: No Impact NEPA: No Impact	No mitigation is required.	CEQA: No Impact NEPA: No Impact
Alternative 3 – Reduced Project: Improve Berths 217–220	**TRANS-1:** Alternative 3 construction would not result in a short-term, temporary increase in truck and auto traffic.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-2: Long-term vehicular traffic associated with Alternative 3 would not significantly impact volume/capacity ratios or level of service.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-3: An increase in on-site employees due to Alternative 3 operations would not significantly increase public transit use.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-4: Alternative 3 operations would not significantly increase freeway congestion.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	TRANS-5: Alternative 3 operations would not cause a significant impact in vehicular delay at at-grade railroad crossings within the proposed project vicinity or in the region.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required.	CEQA: Less than significant NEPA: Not applicable
	TRANS-6: Alternative 3 would not result in inadequate emergency access.	CEQA: No Impact NEPA: No Impact	No mitigation is required.	CEQA: No Impact NEPA: No Impact

3.7.4.9 Mitigation Monitoring

The proposed Project and Alternatives 1 through 3 under CEQA and NEPA would not result in significant traffic impacts at any analyzed intersection or freeway segment. No mitigation measures have been proposed and, consequently, no mitigation monitoring is necessary.

3.7.5 Significant Unavoidable Impacts

There would be no significant unavoidable impacts due to the proposed Project or any of its alternatives.