Section 3.6
Transportation/Circulation

3.6.1 Introduction

This section provides a summary of the ground transportation/circulation impact analysis for the proposed Berth 97-109 Container Terminal Project in the Port of Los Angeles. The transportation analysis of the proposed Project includes streets and intersections (17 key intersections) that would be used by truck and automobile traffic to gain access to and from the Berth 97-109 Container Terminal. In addition, the analysis includes the rail system on which a portion of the containers would be transported to and from the Berth 97-109 Container Terminal as part of the proposed Project (the remainder would be transported by truck). Also, the nearest freeway monitoring stations were assessed in conformance with guidelines from the Los Angeles County Transportation Authority Congestion Management Program. The technical traffic impact data are included in Appendix F.

3.6.2 Environmental Setting

3.6.2.1 Regional and Local Access

Access to the Harbor area is provided by a network of freeways and arterial routes, as shown in Figure 3.6-1. The freeway network consists of freeways I-110, I-710, I-405, and SR–103/SR-47. The arterial street network that serves the West Basin project area includes John S. Gibson Boulevard, Harry Bridges Boulevard, Figueroa Street, Alameda Street, Anaheim Street, Sepulveda Boulevard/Willow Street, Front Street, Harbor Boulevard, and Pacific Avenue. Interstate 110 and I-710 are north-south highways that extend from the Port area to downtown Los Angeles. They each have six lanes near the harbor and widen to eight lanes to the north. Interstate 405 is an eight-lane freeway that passes through the Los Angeles region generally parallel to the coast. The SR-103/SR-47 is a short highway that extends from Terminal Island across the Schuyler Heim Bridge and terminates at Willow Street approximately 800 feet east of the Southern Pacific ICTF. It is six lanes wide on the southern segment, narrowing to four lanes at Anaheim Street.

John S. Gibson Boulevard is a four-lane, north-south street that runs adjacent to I-110 along the western boundary of the West Basin project site. It provides direct access to the Yang Ming Container Terminal at Berths 121-131 and the Project site at Berths 97-109. John S. Gibson Boulevard becomes Pacific Avenue as the street continues south into San Pedro.

Front Street is a four-lane street that intersects with Pacific Avenue and curves around Knoll Hill adjacent to Berths 97-109. After Front Street passes under the Vincent Thomas Bridge approach, the street name changes to Harbor Boulevard, which continues south through San Pedro adjacent to the Los Angeles Harbor Main Channel.

Harry Bridges Boulevard is a four-lane, east-west street that runs along the north side of the West Basin. It provides direct access to the container terminal at Berths 136-139 and provides access to Berths 142-147 via Neptune Avenue, which extends south from Harry Bridges Boulevard.

Figueroa Street is a four-lane street that extends north from the harbor area into Wilmington and Carson along the east side of the I-110. The entrance to the TraPac Container Terminal is at the intersection of Figueroa Street and Harry Bridges Boulevard.

Alameda Street is a four-lane street that extends north from Harry Bridges Boulevard and serves as a key truck route between the harbor area and downtown Los Angeles. Ultimately, Alameda Street will be striped for six lanes over most of its length; and grade separations are at all major intersections south of SR-91. Alameda Street was improved as part of the Alameda Corridor Transportation Corridor Project.

Sepulveda Boulevard is a four-lane, east-west street that passes through the City of Carson and then becomes Willow Street in the City of Long Beach. Sepulveda Boulevard/Willow Street provides direct access to the Union Pacific ICTF.

The transportation environmental setting for the proposed Project includes those streets and intersections that automobile and truck traffic would use to gain access to and from the Berth 97-109 Container Terminal, as well as those streets that construction traffic would use (e.g., equipment and commuting workers). The streets and intersections included in the technical analysis were chosen based on the known routes of travel for trucks and autos to and from the project site as well as the locations most likely to experience a potential significant traffic impact. In terms of surface streets, the only access routes for trucks are Alameda Street, Harry Bridges Boulevard and John S. Gibson Boulevard. All other truck traffic would necessarily come from the freeway system since there are no other legal routes of travel for trucks (most streets to the north in Wilmington are posted as no-truck routes). In addition, port truck origin/destination survey data indicate that a vast majority of the truck trips is destined to and originates from locations farther to the north and east along the I-710 freeway and in industrial areas. It is known that most or all of those trips will use the freeway system, which access would occur via I-110 and I-710 via Ocean Boulevard/Seaside Avenue. Beyond the location of the intersections located farthest from the project site, the level of project-related traffic would be diluted to less than the number of trips that would require analysis per City of Los Angeles Department of Transportation (LADOT) traffic impact study guidelines.

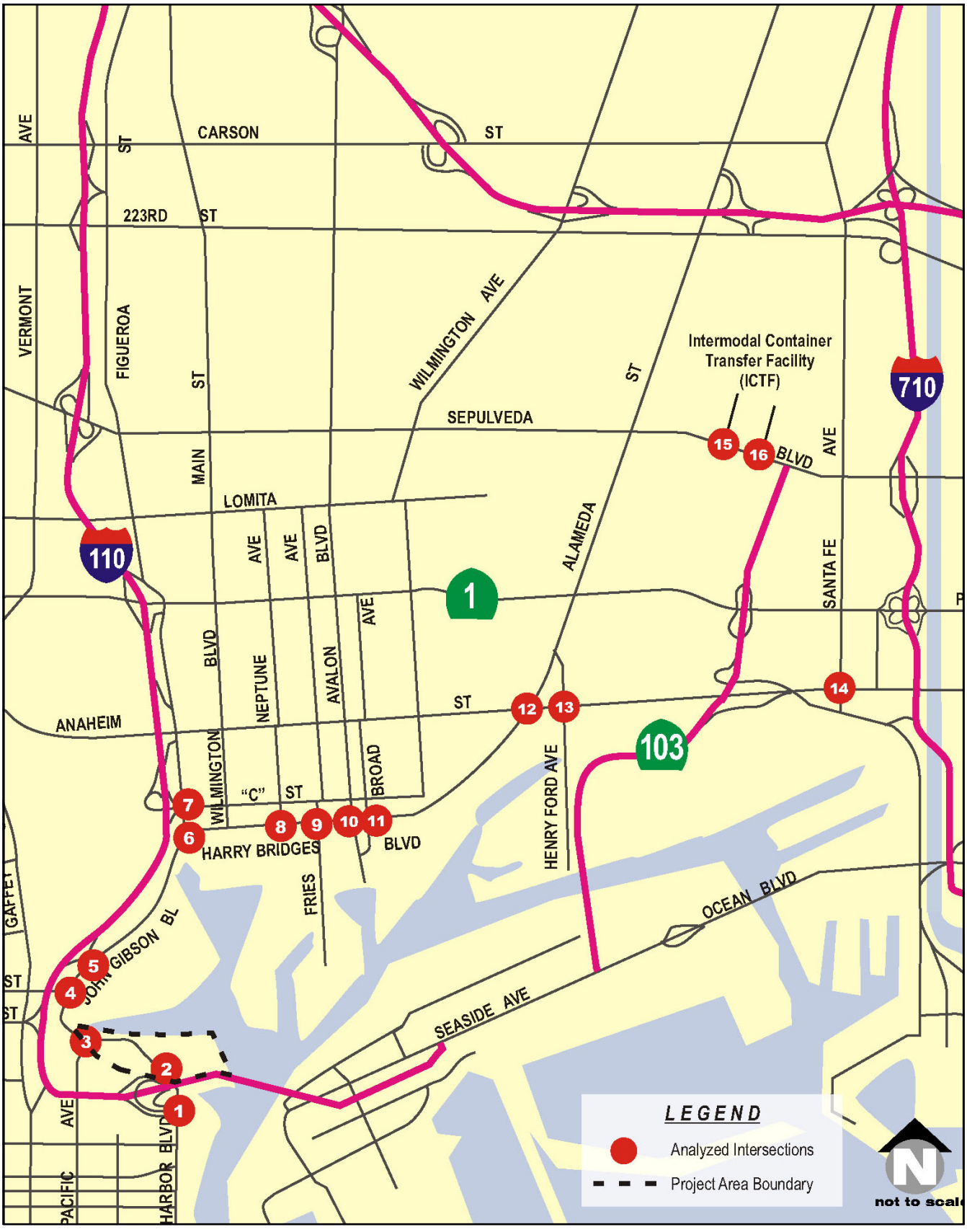

Figure 3.6-1
Study Intersections
Berth 97-109
Container Terminal Project EIS/EIR

Source: Meyer, Mohaddes Associates, Inc., 2005

CH2MHILL

No analysis is required for fewer than 43 trips per LADOT guidelines, and project trips would be less than that at all locations not included in the study. Proposed Project-related automobile and truck traffic most likely would affect traffic on Harbor Boulevard, Front Street, John S. Gibson Boulevard, Harry Bridges Boulevard, Figueroa Street, Alameda Street, Anaheim Street, and Sepulveda Boulevard. The 16 intersections in this study include the following (identified in Figure 3.6-1 for illustration of study intersection locations):

+ Figueroa Street/Harry Bridges (No. 6)
+ Avalon Boulevard and Harry Bridges Boulevard (No. 10)
+ Alameda Street and Anaheim Street (No. 12)
+ Henry Ford Avenue and Anaheim Street (No. 13)
+ Harbor Boulevard and SR-47 westbound (WB) on-ramp (unsignalized) (No. 2)
+ Harbor Boulevard and Swinford Street (No. 1)
+ John S. Gibson Boulevard and I-110 northbound (NB) ramps (No. 5)
+ Figueroa Street/C Street/I-110 ramps (unsignalized) (No. 7)
+ Pacific Avenue and Front Street (No. 3)
+ Fries Avenue and Harry Bridges Boulevard (No. 9)
+ Neptune Avenue and Harry Bridges Boulevard (No. 8)
+ ICTF Driveway No. 1/Sepulveda Boulevard (No. 15)
+ ICTF Driveway No. 2/Sepulveda Boulevard (No. 16)
+ Santa Fe Avenue and Anaheim Street (No. 14)
+ John S. Gibson Boulevard and Channel Street (No. 4)
+ Broad Avenue and Harry Bridges Boulevard (No. 11)
+ Navy Way and Seaside Avenue (No. 17)

Beyond these locations, the project would generate fewer than 43 project trips (thus falling below the City of Los Angeles threshold for analysis), or in the case of Alameda Street, the downstream intersections are all grade separated (aligned at different heights such that they do not disrupt the flow of traffic on one another when they cross) and thus experience no traffic delays (i.e., the crossing at Pacific Coast Highway and Sepulveda Boulevard).

The relationship of the proposed Project site to the regional transportation network is shown in Figure 3.6-1.

3.6.2.2 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 taking peak period vehicle turning movement classification counts at all 17 study locations. A complete presentation of these data is in Appendix F. All traffic counts included truck and auto classifications. Traffic counts were conducted during the peak month in August 1999 and August 2002 from 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. August 1999 counts were available for half of the study intersections. August 2002 counts were used for the study intersections where 1999 counts were not available.

Because the baseline year for Port transportation analyses is from April 2000 to March 2001, the 1999 counts were factored forward to 2000 conditions and 2002 counts were factored (reduced) back to 2000 conditions based on growth between the 1999 and 2002 intersection turning movement counts. The average growth per year was determined to be 5.8 percent from 1999 to 2002. This data was used to establish the baseline 2000 traffic flow at all study locations, which is use to represent the traffic conditions prior to March 2001.

For all roadway system analysis locations, the a.m. peak (8:00 to 9:00 a.m.) and p.m. peak (4:00 to 5:00 p.m.) hours have been assessed. Baseline 2000 a.m. peak and p.m. peak-hour traffic volumes are presented in Appendix F. The mid-day peak hour was not analyzed because the total traffic during the mid-day is less than the a.m. and p.m. peak hours; therefore, the a.m. and p.m. peaks represent the worst case. Daily (24-hour) traffic counts along Harry Bridges Boulevard indicate that the mid-day peak hour traffic volume on that roadway in the West Basin area ranges from approximately 5 percent to 6 percent of the daily total traffic, while a.m. peak hour volumes range from 8 percent to 11 percent of the daily total traffic and p.m. peak hour traffic volumes range from 10 percent to 12 percent of the daily total traffic. Thus, it is apparent that the mid-day peak is clearly lower in terms of overall traffic flow on the local roadway system. In addition, LADOT guidelines for traffic studies only require a.m. and p.m. peak hours to be assessed. 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 truck traffic in the port area occurs sometime during the mid-day (noon to 3:00 p.m.) period, greater levels of traffic occur during the a.m. and p.m. peak hours due to the greater level of regional auto traffic. The forecast future generation of mid-day peak-hour container terminal-generated traffic around the port (accounting for passenger car equivalent [PCE] of trucks) is approximately 2 to 10 percent higher than the highest a.m. or p.m. peak-hour, and the difference amounts to only a few hundred vehicles portwide in 2030 and up to 2,000 vehicles portwide in 2015. This finding applies to all container terminals, including those in the West Basin area.

The much larger difference between background regional traffic levels in the mid-day peak versus am and pm peak-period far exceed this relatively small difference in port-generated traffic. Thus, overall total traffic levels, accounting for Port and non-Port sources, are larger during the traditional commute peak hours than the mid-day. Finally, nearly all non-Port cumulative projects generate their highest levels of traffic during the traditional a.m. and p.m. peak hours, such as housing, office, retail and other non-Port cumulative projects in the area and regionally. Because of this, future terminal operations have a greater potential to significantly affect the a.m. and p.m. peak hours despite heavier project-related traffic occurring during mid-day.

Study intersections are located in the City of Los Angeles and in the City of Long Beach. The two cities have approved different methods to assess operating conditions in intersections; however, the methodologies and results are similar and usually yield the same conclusions. In Los Angeles, the Department of Transportation has adopted the use of the Critical Movement Analysis (CMA) method, as published in *Los Angeles Department of Transportation Traffic Study Policies and Procedures* (City of Los Angeles, 2003). In accordance with LADOT guidelines, the CMA method is applied in the study to all intersections regardless of what jurisdiction each intersection is located within.

LOS is a qualitative indication of the operating conditions of an intersection as represented by traffic congestion, delay, and the volume to capacity (V/C) ratio. For signalized intersections, LOS is measured from LOS A (excellent conditions) to LOS F (very poor conditions), with LOS D (V/C of 0.90, fair conditions) typically considered to be the threshold of acceptability. The relationship between the V/C ratio and LOS for signalized intersections is as follows:

Level of Service Criteria—Signalized Intersections

V/C Ratio	LOS	Traffic Conditions
0 to 0.60	A	Little or no delay/congestion
>0.601 to 0.70	B	Slight congestion/delay
>0.701 to 0.80	C	Moderate delay/congestion
>0.801 to 0.90	D	Significant delay/congestion
>0.901 to 1.00	E	Extreme congestion/delay
1.00 +	F	Intersection failure/gridlock

For signalized intersections, the LOS values were determined by using the CMA methodology contained in the Transportation Research Board (TRB) Circular No. 212 – Interim Materials on Highway Capacity. The CMA method is used to determine an intersections level of service by comparing traffic flow (volume) to the capacity (amount of traffic that could flow through the intersection) of the intersection based on numerous factors such as number of lanes, signal operations, and other factors that affect capacity. In addition, trucks use more roadway capacity than automobiles because of their comparative size, weight, and acceleration capabilities. The concept of PCE is used in the study to adjust for the effect of trucks in the traffic stream. 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. A PCE factor of 1.1 was applied to tractors, 2.0 was applied to chassis, and 2.0 was applied to the container truck volumes for the LOS calculations. These factors are consistent with factors applied in previous port studies including the *Ports of Long Beach/Los Angeles Baseline Transportation Study* (*Baseline Transportation Study*) (POLB and POLA, 2001) and subsequent work conducted for the ongoing *Port of Los Angeles Roadway Master Plan* (POLA, 2003). Many of the methodologies employed in this Recirculated Draft 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 (hereinafter referred to as Port Travel Demand Model or the 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 Recirculated Draft EIS/EIR are Project-specific.

Stop-controlled intersections (i.e., intersections controlled by stop signs) were analyzed using methodologies contained in TRB Highway Capacity Manual in which LOS is based on average vehicular delay (TRB, 2000). The relationship between delay and LOS is as follows, for stop-controlled intersections (two-way and multiway stops):

Level of Service Criteria at Stop Controlled Intersections

Level of Service (LOS)	Average Control Delay (seconds/vehicle)
A	0 – 10.0
B	>10.0 – 15.0
C	>15.0 – 25.0
D	>25.0 – 35.0
E	>35.0 – 50.0
F	>50.0

Freeway segments were analyzed in compliance with the 2004 County of Los Angeles Congestion Management Program (CMP). The Congestion Management Program is the official source of data for regional coordination of traffic studies in the County of Los Angeles. The CMP uses the demand-to-capacity (D/C) ratio to determine LOS. The relationship between the D/C ratio and LOS for freeway segments per the CMP is as follows:

Freeway Level of Service Criteria

Freeway Level of Service (LOS)	Demand/Capacity Ratio
A	0.01-0.35
B	0.36-0.54
C	0.55-0.77
D	0.78-0.93
E	0.94-1.00
F	>1.00

Based on peak-hour traffic volumes, V/C ratios, and average intersection delays, the corresponding LOS has been determined and is summarized in Table 3.6-1. The data in the table indicate that all of the existing study intersections currently operate at LOS C or better during the peak hours, with the majority of intersections operating at LOS A during peak hours. The worst intersections, Harbor Boulevard/Swinford Street/SR-47 off-ramp and Figueroa Street/C Street/I-110 ramps, which operated at LOS C during the a.m. and p.m. peak hours in 2000. This location (Harbor Boulevard/Swinford Street/SR-47 ramps) has also been observed to operate at LOS F at other times, including some weekends and midday weekdays when vehicle flows peak as a result of container-terminal activity, cruise ship terminal activity, and general San Pedro activity.

Table 3.6-1. Existing Year 2000
Intersection Level of Service Analysis

Study Intersection	Existing 2000			
	a.m. Peak Hour		p.m. Peak Hour	
	LOS	V/C or Delay	LOS	V/C or Delay
Figueroa Street and Harry Bridges Boulevard	A	0.362	A	0.398
Avalon Boulevard and Harry Bridges Boulevard	A	0.294	A	0.310
Alameda Street and Anaheim Street	A	0.513	A	0.484
Henry Ford Avenue and Anaheim Street	A	0.409	A	0.574
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	8.9	A	9.2
Harbor Boulevard and Swinford Street/SR-47 Ramps	C	0.703	C	0.722
John S. Gibson Boulevard/I-110 NB Ramps	A	0.503	A	0.468
Figueroa Street/C Street/I-110 Ramps [(b)]	C	17.4	C	21.3
Pacific Avenue and Front Street	A	0.463	A	0.403
Fries Avenue and Harry Bridges Boulevard	A	0.259	A	0.338
Neptune Avenue and Harry Bridges Boulevard	A	0.186	A	0.284
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.312	A	0.516
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.354	A	0.398
Santa Fe Avenue and Anaheim Street	A	0.336	A	0.470
John S. Gibson Boulevard/Channel Street	A	0.514	B	0.600
Broad Avenue/Harry Bridges Boulevard	A	0.212	A	0.285
Navy Way/Seaside Avenue	A	0.504	A	0.472

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.
[(a)] unsignalized intersection
[(b)] all-way stop-controlled intersection
*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

3.6.2.3 Existing Transit Service

Two transit agencies provide service around the proposed Project site in the Wilmington/ San Pedro area, the Metropolitan Transportation Authority (MTA) and the Municipal Area Express (MAX). Together, the two transit agencies operate five transit routes within and/or near the proposed Project as follows:

MTA Transit Line 445 (San Pedro-Artesia Transit Center-Patsaouras Transit Plaza/Union Station Express). MTA Transit Line 445 provides express bus service from Downtown Los Angeles to San Pedro via I-110. Line 445 starts at Patsaouras Transit Plaza/Union Station in Downtown Los Angeles and travels south to its final destination in San Pedro at Pacific and 21st Street. Days of operation are Monday through Sunday, including all major holidays. The a.m. and p.m. peak period headway ranges between 30-51 minutes and 39-50 minutes, respectively. Saturday mid-day peak period is 1 hour.

MTA Transit Line 446 (San Pedro-Pacific Avenue-Wilmington-Carson-Patsaouras Transit Plaza/Union Station Express). MTA Transit Line 446 provides express bus service from Downtown Los Angeles to San Pedro via I-110, Avalon Boulevard, and Pacific Avenue. Line 446 starts at Patsaouras Transit Plaza in Downtown Los Angeles and travels south to its final destination at the Korean Bell Site. Days of operation are Monday through Sunday, including all major holidays. The a.m. and p.m. peak period headway is approximately 1 hour and between 1 hour and 1 hour and 15 minutes, respectively. Saturday mid-day peak period headway is 1 hour.

MTA Transit Line 447 (San Pedro-7th Street-Wilmington-Carson-Patsaouras Transit Plaza/Union Station Express). MTA Transit Line 447 provides express bus service from Downtown Los Angeles to San Pedro via I-110, Avalon Boulevard, Harbor Boulevard and 7th Street. Line 447 starts at Patsaouras Transit Plaza in Downtown Los Angeles and travels south to its final destination at 7th Street and Patton Avenue. Days of operation are Monday through Sunday, including all major holidays. The a.m. and p.m. peak period headway is approximately 30 minutes and between 30 minutes and 1 hour and 15 minutes, respectively. Saturday mid-day peak period headway is 1 hour.

MTA Transit Line 202 (Willowbrook-Compton-Wilmington). MTA Transit Line 202 is a north-south local service that travels from Wilmington to Willowbrook. Although Line 202 does not travel through the proposed Project site, its final destination at Avalon and D Street falls slightly north of Harry Bridges Boulevard, the Project site's northern most boundary. Days of operation are Monday through Friday, including all major holidays. The a.m. and p.m. peak period headway is approximately 1 hour.

Municipal Area Express MX 3X (San Pedro-El Segundo Freeway Express). MX 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 Pacific Crest near the USAF 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./p.m. peak period does not apply because there is only one bus.

3.6.3 Impacts and Mitigation Measures

3.6.3.1 Methodology

Impacts were assessed by quantifying differences between baseline conditions and future conditions under the proposed Project and the other alternatives. Future Project-related traffic conditions for the years 2005, 2015, 2030, and 2045 were estimated by adding traffic due to proposed local development projects, regional traffic growth, and traffic increases resulting from Port terminal throughput growth plus the proposed Project. Baseline conditions include baseline year (April 2000 through March 2001) traffic volumes plus other growth not related to the Project (i.e., traffic due to proposed local development projects, regional traffic growth, and traffic increases from Port terminal throughput growth) and includes no growth in operations at the Berth 97-109 site. This approach, involving assessment of a project's traffic impacts in light of expected future

traffic conditions, is appropriate under CEQA where the lead agency determines, on the basis of substantial evidence, that environmental conditions surrounding a project will change regardless of project approval. (See *Napa Citizens for Honest Government v. Napa County Board of Supervisors* [2001] 91 Cal.App.4th 342, 363.)

Local traffic growth was forecasted based on a computerized traffic analysis tool known as the Port of Los Angeles Travel Demand Model, which includes traffic growth for the port and the local area. The Port Travel Demand Model was originally developed for the *Ports of Long Beach and Los Angeles Transportation Study* (June 2001) and was subsequently revised and updated for several efforts including the *Port of Los Angeles Baseline Transportation Study* (POLB and POLA, 2003). The model is a tool that is based on the Southern California Association of Governments' (SCAG) Regional Travel Demand Forecasting Model. Elements of the SCAG Heavy-Duty Truck (HDT) model were used, as well as input data from the City of Long Beach model and the City of Los Angeles Transportation Improvement Mitigation Program (TIMP) models for Wilmington and San Pedro. TRANPLAN is the software program used for modeling. The Port Travel Demand Model data is owned by the Port and housed and operated at consultant offices.

The Port Travel Demand Model includes growth that accounts for cumulative projects near Berths 97-109. The model also includes numerous other cumulative projects in Long Beach and throughout the region. Table 3.6-2 lists those cumulative projects near Berths 97-109, such as projects in Wilmington, San Pedro, and Harbor City. Other cumulative projects located farther from Berths 97-109, including Port of Long Beach projects, are in the model but are not listed in the table because their resulting trips will not travel on the study area roadway system or study intersections and would be limited to the freeway system. Table 3.6-2 summarizes the cumulative Project-generated trip forecasts, which are justified by model forecasts.

The SCAG Regional Model, which was developed originally from the Caltrans LARTS model, is the basis and "parent" of most subregional models in the southern California five-county region, comprised of Ventura, Los Angeles, Orange, San Bernardino, and Riverside counties. At the regional level, this model has the most comprehensive and up to date regional data –for both existing and future conditions- on housing, population, employment, and other socio-economic input variables used to develop regional travel demand forecasts. The model has over 2000 zones and a complete network of regional transportation infrastructure, including over 1,000 miles of freeways and over 7,000 miles of major, primary, and secondary arterials.

Table 3.6-2. Cumulative Proposed Project Trip Generation

No.	Element	Location	a.m. Peak Trips			p.m. Peak Trips			Daily
			In	Out	Total	In	Out	Total	Total
1	Cabrillo Marina (1)	Miner Street /22nd Street	73	58	131	138	124	262	3,867
2	Carnival Cruise Terminal - Relocation (2)	Harbor Boulevard /Swinford Street	152	152	304	51	48	99	2,627
2A	Carnival Cruise Terminal - Removal (2)	Harbor Boulevard /Swinford Street	(152)	(152)	(304)	(51)	(48)	(99)	(2,627)
3	Fisherman's Village & Day Cruises - Relocation								
	- High-Turnover Restaurant (3)		67	62	129	228	152	380	9,124
	- Day Cruise Ships (4)		39	0	39	37	132	169	531
	- Remove Ex. Rio Doce Pasha (5)		(7)	(11)	(18)	(8)	(9)	(17)	(203)
	Net New Trips		99	51	150	257	275	532	9,452
3A	Fisherman's Village & Day Cruises - Removal								
	- High-Turnover Restaurant (3)		(67)	(62)	(129)	(228)	(152)	(380)	(9,124)
	- Day Cruise Ships (4)		(39)	0	(39)	(37)	(132)	(169)	(531)
	Net New Trips		(106)	(62)	(168)	(265)	(284)	(549)	(9,655)
4	Pacific Corridor Redevelopment Project (6)								
	- Commercial /Retail (7)		378	242	620	1,081	1,171	2,252	25,836
	- Manufacturing		126	38	164	60	106	166	854
	- Residential		113	591	704	573	282	855	9,149
	Net New Trips		524	740	1,264	1,456	1,325	2,781	30,463
5	Night Club /Sports Bar		14	7	21	181	85	266	932
6	Mt. Sinai Missionary Baptist Church	Mesa Street /2nd Street	30	30	60	37	26	63	374
7	Regal Theater (8)		0	0	0	51	38	89	153
8	Gas Station & Minimart (9)	Gaffey Street /Sepulveda Street	61	61	122	81	81	162	1,953
9	15th Street Elementary School - San Pedro		51	36	87	36	42	78	306
10	Pedestrian Promenade		NEGLIGIBLE TRIPS						
11	Fishing Reef		NEGLIGIBLE TRIPS						
12	Cabrillo Beach Aquarium Expansion		NEGLIGIBLE TRIPS						
13	Mini Mall (9)	Wilmington Boulevard /Anaheim Street	95	60	155	46	50	96	1,430
14	Bakery /Restaurant (9)	Wilmington Boulevard /Anaheim Street	149	155	304	114	94	208	3,084
15	Gas Station with Market (9)	Fries Avenue /Anaheim Street	20	20	40	24	24	48	579

Table 3.6-2. Related Proposed Project Trip Generation (continued)

No.	Element	Location	a.m. Peak Trips			p.m. Peak Trips			Daily
			In	Out	Total	In	Out	Total	Total
21	135 Single Family Homes (10)	Gaffey Street /Basin Street	51	51	102	68	68	136	1,292
22	72 Condos & 7,000 SF Retail (10)	8th Street /Center Street	20	20	40	32	32	64	723
23	Target (10)	Gaffey Street /Capitol Dr	75	75	150	197	197	394	5,610
24	Palos Verdes Urban Village (10)	Palos Verdes Street /5th Street	39	39	78	23	23	46	561
25	Wilmington Waterfront	Harry Bridges Boulevard/Avalon Boulevard	81	51	132	327	251	578	6,188
26	Yang Ming Container Terminal								
	- Year 2005		244	105	349	199	290	489	4,879
	- Year 2015		259	112	371	212	308	520	5,178
	- Year 2030		181	132	313	148	217	365	4,810
	- Year 2045		181	132	313	148	217	365	4,810
27	TRAPAC Container Terminal								
	- Year 2005		283	113	395	229	325	555	5,711
	- Year 2015		354	163	517	291	434	725	7,009
	- Year 2030		316	237	553	260	392	652	8,321
	- Year 2045		316	237	553	260	392	652	8,321
Total Net New Trips (Year 2005):			2,410	2,194	4,604	3,505	3,432	6,937	76,055
Total Net New Trips (Year 2015):			2,496	2,252	4,748	3,579	3,559	7,138	77,652
Total Net New Trips (Year 2030):			2,380	2,346	4,726	3,484	3,426	6,910	78,596
Total Net New Trips (Year 2045):			2,380	2,346	4,726	3,484	3,426	6,910	78,596

Notes:

(1) Based on data from "Traffic Study for Cabrillo Marina Phase II" for Port of Los Angeles (Kaku Associates, November 2002), page 26.

(2) Based on data from "Traffic and Parking Study for the Carnival Cruise Passenger Terminal" for the Port of Long Beach (Kaku Associates, July 2000), page 23.

(3) Based on field observations at this location, a.m. weekday trips were assumed to be 20% of the ITE rate and p.m. weekday trips were assumed to be 50% of the ITE rate.

(4) Based on an assumed typical operating scenario.

(5) Peak hour rates based on percentage of peak hour to daily of LU 030 (Truck Terminal)

(6) Based on data from "Pacific Corridor Redevelopment Project, Final EIR, Appendix F for the City of Los Angeles (Meyer, Mohaddes Associates, November 2001). The net new trips reflect a 15% reduction in trips due to local "linked" trip estimates.

(7) ITE Trip Generation, 6th Edition, Rates for a.m. Peak Hour estimated based on proportions in the data on Shopping Centers (ITE LU 820). Pass-by trips were assumed to be 25% of all retail commercial trips.

(8) Theater is to be 2,714 s.f. This size supports the assumption of a single screen auditorium.

(9) Data provided by LADOT, September 2002, August 2003.

(10) Data provided by LADOT, April 2007.

*Maximized at Year 2025

For purposes of subregional 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 SCAG 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 Travel Demand Model has been comprehensively updated and detailed in the Port focus area.

The SCAG Regional Heavy-Duty Truck (HDT) model is 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 higher. 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 are implemented including: link capacity enhancements, truck prohibitions, and incorporation of truck PCE factors. All of these were carried forward into the Port 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, (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 Travel Demand Model takes all of these factors into account. The SCAG model is owned, developed and housed at SCAG offices, and is used by agencies and consultants for subregional planning work, such as for the Port EIR studies.

The Port Travel Demand Model was used to generate growth factors that account for cumulative projects near Berth 97-109. The model also includes numerous other cumulative projects in Long Beach and throughout the region. Table 3.6-2 lists those cumulative projects near Berth 97-109, such as projects in Wilmington, San Pedro and Harbor City. Other cumulative projects located farther away from Berth 97-109 are represented in the model via socioeconomic data including population, housing and employment, but are not listed in the table since their resulting trips will not travel on the study area roadway system or study intersections and would be limited to the freeway system. Table 3.6-2 summarizes the related proposed Project trip generation forecasts, which apply for the 2005, 2015, 2030, and 2045 analyses.

3.6.3.1.1 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 would normally constitute the baseline physical conditions by which the CEQA lead agency determines whether an impact is significant. However, a lead agency has discretion not to use an environmental baseline set as of the time of the NOP for analysis of traffic impacts where the agency determines, on the basis of substantial evidence, that future traffic impacts surrounding the proposed Project will change regardless of whether the proposed Project is approved. (See *Napa Citizens v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342, 363.)

In the case of the proposed Project for purposes of this Recirculated Draft EIS/EIR, the baseline for determining the significance of potential Project impacts is from April 2000 to March 2001, pursuant to the Amended Stipulated Judgment described in Chapter 1, Section 1.4.3. Therefore, the only Project-related traffic included in the CEQA baseline is that associated with onsite container storage operations at the site during the baseline year prior to March 2001. Nevertheless, because the Port anticipates that local traffic conditions surrounding the proposed Project will increase regardless of whether the proposed Project is approved, CEQA baseline conditions for this traffic analysis also include other anticipated future growth not attributable to the proposed Project (i.e., traffic in a given year due to other proposed local development projects, regional traffic growth, and traffic increases from Port terminal throughput growth not including the proposed Project.)

The CEQA baseline differs from the No Project Alternative (discussed in Section 2.5.1) in that the No Project Alternative addresses what is likely to happen at the site over time, starting from the baseline conditions. The No Project Alternative allows for growth at the proposed Project site that would occur without any required additional approvals.

The CEQA baseline was compared against the proposed Project conditions for the horizon years. The impact using this methodology accounts for the proposed Project itself, as well as regional traffic growth, proposed local development projects, and traffic increases resulting from Port terminal throughput growth that is not attributable to the proposed Project. This method ensures that the growth of background traffic in future years is not improperly attributed to the Project. Although this methodology differs from other impact sections in which the CEQA baseline is treated like a snapshot in time, it is utilized because it provides a realistic and conservative identification and determination of the likely traffic impacts.

3.6.3.1.2 NEPA Baseline

For purposes of this Recirculated 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 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 permit from the USACE. Therefore, unlike the CEQA baseline, the NEPA baseline for this project is not fixed. Rather, it is dynamic to account for the many activities and impacts expected to occur even in the absence of a USACE permit. For this project, the NEPA baseline includes construction and operation of backlands container operations on up to 117 acres, but precludes construction of wharves and bridges, dredging, and improvements that would require a federal permit. The NEPA baseline would result in upland development, including additional acreage of container

backlands over the 2001 baseline conditions (i.e., the 72 acres of backlands currently in use and another 45 acres resulting from the Channel Deepening Project). To ensure a full analysis of the impacts associated with Phases I through III, the NEPA baseline does not include the dredging required for the Berth 100 wharf, the existing bridge across the Southwest Slip, or the 1.3 acres of fill constructed as part of Phase I (i.e., the project site conditions are considered without the in-water Phase I activities and structures). In addition, the NEPA baseline would store or manage up to 632,500 TEUs onsite, but no annual ships calls are included in the NEPA baseline (see Section 2.6.2 for further information).

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. Therefore, the USACE may project increases in operations over the life of a project to properly describe the NEPA baseline condition. Normally, any ultimate permit decision would 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 alternative is defined by comparing the proposed Project or alternative to the NEPA baseline (i.e., the increment). The NEPA baseline conditions are described in Section 2.1.

The NEPA baseline also differs from the No Project Alternative, where the Port would take no further action to construct and develop additional backlands (other than the 72 acres that are currently developed). Under the No Project Alternative, no construction would occur, other than the Phase I construction. However, the abandonment of the existing bridge and 1.3 acres of fill, as well as removal of the four A-frame cranes built as part of Phase 1, would occur. Forecasted increases in cargo throughput would still occur as greater operational efficiencies are realized.

3.6.3.1.3 Background Ambient (Not Proposed Project-Related) Traffic Growth

Regional background (ambient) traffic growth was estimated using data from the Port Travel Demand Model (described in Section 3.6.3.1), which covers related proposed Project traffic growth, as shown in Table 3.6-2. 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 SCAG. SCAG forecast data for 2005, 2015, and 2030 were compared to existing data. SCAG forecast data is not available for 2045; therefore, a 10 percent growth factor was applied to 2030 forecast data. It should be noted that most of the cumulative projects, including the San Pedro Waterfront Project, are covered by the growth forecasts of the Port Travel Demand Model. Other projects are not included in the SCAG Regional Travel Demand Forecasting Model and were thus separately accounted for in the local area mode. All Ports of Long Beach and Los Angeles container and noncontainer terminal traffic growth is included in the Port Travel Demand Model.

The background future traffic volumes (which account for cumulative growth) are developed based on the Port Travel Demand Model traffic growth and the 2000 traffic volume data. This determines proposed Project traffic conditions for 2005, 2015, 2030, and 2045.

3.6.3.1.4 Proposed Project-Related Trip Generation

Traffic growth related to the proposed Project 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 Baseline Transportation Study* (POLB and POLA, 2001). QuickTrip estimates terminal truck flows by hour of the day based on TEUs 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 percent of actual counts for all terminals combined (both directions combined), depending on which peak hour is modeled.

Each of the analysis years was defined by changing operating parameters as follows: increased weekend activity; expanded terminal operating hours (more second shift and hoot shift [night-time] activity); 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. Since cargo volume (throughput) would increase over the years, terminals would be forced to change their operations to accommodate the increase in containers. These operational changes have already started to occur in response to increased cargo volume. For example, hoot shift activity has increased in reaction to the Pier-Pass program, which has shifted gate activity to nonpeak hours. Increased throughput does not translate directly into increased truck trips proportionately due to the different terminal operating parameters over the years.

3.6.3.1.5 Anticipated Transportation Improvements

The Port is currently planning a number of transportation projects slated for the West Basin area including improvements to freeway ramp/arterial interchanges along SR-47 and I-110. These projects were developed as part of the ongoing *Port of Los Angeles Roadway Transportation Study* (*Roadway Study*). The *Roadway Study* has not been finalized, but several of the transportation projects contained in the study have been reviewed by Caltrans. Caltrans is the agency that owns, operates and controls these transportation facilities. Thus, 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 the proposed Project, describes the project components, analyzes the project and assesses project alternatives. After approval of the PSR, transportation improvement projects are considered to be approved by Caltrans for purposes of proceeding to the development of geometric plans, right-of-way maps, environmental studies and then 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 earmarked for these projects. Because these projects have been approved by Caltrans through the PSR process and have committed funding, the Port has determined that the environmental conditions that will be affected by the operational traffic impacts of the Project will include the following anticipated transportation improvement projects. Therefore, the analysis in this chapter

of the EIS/EIR assumes that these projects will be in place during the period in which the Project will have operational transportation impacts.

The anticipated transportation improvement projects include:

Figueroa Street/C Street Interchange. The C Street/Figueroa Street interchange would reconfigure the northbound off-ramp to directly access Harry Bridges Boulevard, modify the northbound on-ramp, realign Harry Bridges Boulevard at this location, and combine the I-110 ramps/C Street/Figueroa Street intersection and the John S. Gibson Boulevard/Harry Bridges Boulevard intersections. Horizon year for completion is 2015.

South Wilmington Grade Separation. Implementation of this transportation improvement will not affect the traffic impacts of the proposed Project. An elevated grade separation would be constructed along a portion of Fries Avenue, over the existing rail line tracks, to eliminate vehicular traffic delays that would otherwise be caused by trains using the existing rail line and the new ICTF rail yard. The elevated grade would include a connection onto Water Street. There would be a minimum 24.5-foot clearance for rail cars traveling under the grade separation. Horizon year for completion is 2015.

John S. Gibson Boulevard Intersection at I-110 Ramps. This transportation improvement would widen the I-110 on-ramp from John S. Gibson Boulevard, and widen John S. Gibson Boulevard at its intersection with the I-110 ramps. An additional left-turn lane along southbound John S. Gibson Boulevard at the Yang Ming Terminal entrance would also be provided, as well as some striping modifications. Widening of the John S. Gibson Boulevard intersection at I-110 ramps would utilize adjacent Port and City property. Horizon year for completion is 2015.

Additional Lane for SR-47 to Northbound I-110 Transition. Implementation of this transportation improvement will not affect the traffic impacts of the proposed Project. The existing ramp connecting westbound SR-47 to northbound I-110 would be widened by one lane to the north to the John S. Gibson Boulevard off-ramp. The new lane would be at-grade, consistent with the existing ramp. The widening would occur on state property. Horizon year for completion is 2015.

Widening of SR-47/Harbor Boulevard Off-Ramp and Additional Right-Turn Lane. The approach of the existing off-ramp from eastbound SR-47 to Harbor Boulevard would be widened to the south to accommodate an additional right-turn lane. The approach would be restriped. This project would utilize state right-of-way. Horizon year for completion is 2015.

Additional Left-Turn Lane on Harbor Boulevard to Eastbound SR-47. Harbor Boulevard would be widened at its intersection with Swinford Street to accommodate an additional northbound left-turn lane from Harbor Boulevard to the existing eastbound SR-47 on-ramp. The widening would occur on Port, Caltrans, or City property, and the roadway would be restriped. Horizon year for completion is 2015.

Widening of Harbor Boulevard between Swinford Street and SR-47 Northbound On-Ramp. Harbor Boulevard between Swinford Street and the northbound SR-47 on-ramp would be widened to accommodate an additional left-turn lane for the SR-47 northbound ramp and a new traffic signal installed. The widening would occur on Port or City property and the roadway would be restriped. Horizon year for completion is 2015.

3.6.3.2 Thresholds of Significance

A project or action in the Los Angeles Harbor is considered to have a significant transportation/circulation impact if the project or action 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.

TRANS-1 Short-term impacts to streets may occur during proposed Project construction. In the absence of specific criteria for construction impacts from LADOT, the same significant impact thresholds for intersections during operations are also applied for the construction period. Thus, a project would have a significant impact under CEQA or an adverse impact under NEPA on transportation/circulation during construction if it would increase an intersection's V/C ratio in accordance with the following guidelines:

+ V/C ratio increase greater than or equal to 0.040 if final LOS is C,

+ V/C ratio increase greater than or equal to 0.020 if final LOS is D, or

+ V/C ratio increase greater than or equal to 0.010 if final LOS is E or F.

TRANS-2 A project would have a significant impact under CEQA or an adverse impact under NEPA on transportation/circulation upon operation of the project if it would increase an intersection's V/C ratio in accordance with the following guidelines:

+ V/C ratio increase greater than or equal to 0.040 if final LOS is C,

+ V/C ratio increase greater than or equal to 0.020 if final LOS is D, or

+ V/C ratio increase greater than or equal to 0.010 if final LOS is E or F.

If an unsignalized intersection is projected to operate at LOS C, D, E, or F, the intersection was re-analyzed using the signalized intersection methodology to determine the significance of impacts using the sliding scale criteria described above per *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006).

TRANS-3 Additional demand on local transit services may occur due to project operation. However, LADOT does not have any established thresholds to determine significance of transit system impacts. The project would have an impact on local transit services if it would increase demand beyond the supply of such services anticipated at Project Build-out.

TRANS-4 According to the CMP, Traffic Impact Analysis Guidelines, an increase of 0.02 or more in the D/C ratio with a resulting LOS F at a CMP arterial monitoring station is deemed a significant impact. This applies only if the project meets the minimum CMP threshold for analysis, which are 50 trips at a CMP intersection and 150 trips on a freeway segment.

TRANS-5 An increase in rail activity could cause delays to motorists at the affected at-grade crossings where additional project trains would cross and/or where the project would result in additional vehicular traffic flow. The project is considered to have a significant impact at the affected at-grade crossings if the average vehicle control delay caused by the project at the crossing would exceed the Highway Capacity Manual (HCM) threshold for level of service E at a signalized intersection, which is 55 seconds of average vehicle

delay.[1] The Highway Capacity Manual is the national standard for the measurement of highway and intersection capacity and levels of service. Unsignalized delay thresholds do not apply since the delay is typically very small and no similar standards have been developed locally or nationwide for unsignalized locations.

Under **TRANS-1** and **TRANS-2**, the V/C ratio increases are applied to the a.m. and p.m. peak hours, per LADOT Traffic Study Policies and Procedures, August 2003.

3.6.3.3 Impacts and Mitigation

3.6.3.3.1 Proposed Project

3.6.3.3.1.1 Construction Impacts

Impact TRANS-1: Construction would result in a short-term, temporary increase in truck and auto traffic.

CEQA Impact Determination

There would be temporary impacts on the study area roadway system during construction of the proposed Project because the construction activities would generate vehicular traffic associated with construction workers' vehicles and trucks delivering equipment and fill material to the site. This site-generated traffic from construction of the various project components would result in increased traffic volumes on the study area roadways for the duration of the construction periods, which would span a period of 1.5 years for Phase I (2002-2003) and 3 years for Phases II and III (2009-2012).

The average levels of traffic generated by the construction activities and hours of construction operation have been estimated for each component of the proposed Project, as shown below. The construction schedule and traffic levels have been estimated based on a number of similar construction projects at the Port of Los Angeles. These construction estimates are based on information contained in the Draft West Basin EIR Transportation and Circulation section (LAHD, 1997) that, in turn, are based on construction phasing estimates, construction worker needs, truck traffic estimates by type, grading quantity estimates, materials quantity estimates and other construction quantity estimates for a typical container terminal project.

+ Construction Traffic
  - Berths 97-109
    - Auto Trips per Day: 200
    - Truck Trips per Day: 200
    - Total Daily Traffic: 400
+ Hours of Construction Operation
  - Monday through Saturday: 7:00 a.m. to 3:00 p.m.

[1] Highway Capacity Manual 2000, Transportation Research Board, National Research Council, Washington, D.C., 2000, p 16-6, Exhibit 16-2.

Thus for the a.m. peak hour there would be an assumed 100 inbound worker trips and 20 truck trips (200 daily truck trips divided into 10 hour work shift), and during the p.m. peak hour there would be 100 outbound worker trips and 20 truck trips. Although approximately 200 worker trips are produced, due to the modified work hours, construction worker trips are not expected to affect the surrounding street network during the a.m. and p.m. peak period from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., respectively. Workers will arrive at the construction site prior to the a.m. peak period (shift starts at 7:00 a.m.) and depart before the p.m. peak period (shift ends at 3:00 p.m.). Therefore, significant traffic impacts from construction workers' vehicles would not occur.

As a standard practice, the Port 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, identify temporary alternative bus routes, advanced notice of temporary parking loss, identify 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 signing for construction activities. The traffic management plan are submitted to LAHD for approval before beginning construction. This procedure would also be applied to construction activities for all the project alternatives.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

The proposed Project would develop more backlands acreage (24 acres) than the NEPA baseline at the Project site. However, since construction workers' arrival and departure trips would occur before the a.m. and p.m. peak hours, impacts to the transportation system from construction-related traffic would not be significant (see CEQA discussion above).

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impacts.

3.6.3.3.1.2 Operational Impacts

Impact TRANS-2: Long-term vehicular traffic associated with the proposed Project would significantly impact six study intersection volume/capacity ratios, or level of service.

CEQA Evaluation

Traffic conditions with the proposed Project for the years 2005, 2015, 2030, and 2045 were estimated by adding traffic resulting from the new container terminal and associated throughput growth to the applicable CEQA baseline. Port traffic growth was developed using the QuickTrip truck-generation model (Section 3.6.3). Table 3.6-3 summarizes the TEU throughput for the CEQA baseline and the proposed Project and includes the assumed operating parameters that were used to develop the trip generation forecasts. Traffic generated by the proposed Project was estimated to determine potential impacts of the proposed Project on study area roadways. These operating parameters are derived from and consistent with the parameters developed and applied in the *Port of Los Angeles Baseline Transportation Study* (POLB and POLA, 2001) and the *Port of Los Angeles Roadway Study* (POLA, 2003). These assumed operating parameters were developed by the ports and port consultants based on careful consideration of likely port operating conditions at the Ports in each future year, and they take into account the required operating procedures to achieve the forecast port growth.

Work shifts. Consistent with ongoing Port-area transportation studies, the gate moves are expected to be distributed as follows: 80 percent day shift, 10 percent night shift, 10 percent hoot shift (3 a.m. to 8 a.m.) in 2005; 80 percent day shift, 10 percent night shift, 10 percent hoot shift in 2015; and 60 percent day shift, 20 percent night shift, and 20 percent hoot shift in 2030 and 2045. Shift splits as of 2000 showed over 90 percent of TEU throughput during the day shift. The 80/10/10 split assumption was determined jointly by Ports of Long Beach and Los Angeles staff. This shift split was considered to be realistic and reasonably conservative for purposes of CEQA traffic studies and these assumptions are consistent with the *Port of Los Angeles Roadway Study* methodology and assumptions (POLA, 2003). A greater reduction in daytime throughput only was assumed in the longer term (2030 and 2045) to be reasonably conservative given expected changes in long-term port operations.

Auto Trip Generation. The baseline and proposed Project employee trip rates are based upon the *Ports of Long Beach and Los Angeles Transportation Study* trip-generation methodology, which estimates employment trips based on TEU throughput using trip-generation rates (POLB and POLA, 2001).

TEU Throughput Growth. Additional TEUs per month resulting from the proposed Project are shown in Table 3.6-3. These are based on forecasts of overall Portwide growth and estimates of terminal capacity. In the future, it is assumed that the movement of goods will be more equally spread throughout the year. This is based on historical observations showing that the peak month has declined over time, more goods are moved equally throughout the year, and there is less and less "peaking" for the holiday period. Due to the future increased need for goods movement year around it was determined that the likely pattern in the future will be for equal movement in each month.

Table 3.6-3. Trip Generation Analysis Assumptions and Input Data for Berth 97-109 Terminal

Berth 97-109	CEQA Baseline	Proposed Project			
	2000	2005	2015	2030	2045
Gross Acres	11	72	142	142	142
Resultant TEUs (annual)	45,135	403,200	1,164,400	1,551,100	1,551,100
Peak Month Factor (1)	—	0.091	0.091	0.083	0.083
Monthly TEUs	4,313	36,691	105,960	128,741	128,741
Key Trip Generation Model Input Factors					
Shift Split (%) (day/2nd/night)	80/10/10	80/10/10	80/10/10	60/20/20	60/20/20
On-Dock Rail %	20%	20%	20%	17%	17%
% Double Cycle Trucks	45%	35%	35%	45%	45%
Percentage of Weekly Gate Traffic Allocated to Weekend	15%	15%	15%	15%	15%
Trip Generation Results – a.m. Peak					
Project Added Auto Trips	—	43	133	121	121
Project Added Truck Trips	—	78	240	277	277
Project Added Total Trips	—	121	373	398	398
Trip Generation Results – p.m. Peak					
Project Added Auto Trips	—	58	181	164	164
Project Added Truck Trips	—	111	342	295	295
Project Added Total Trips	—	169	523	459	459

Note: The trips generated for the proposed Project represent incremental increases relative to CEQA baseline.

(1) Peak month factor based on actual gate transaction data from all POLA/POLB container terminals where such data were available

On-Dock Rail Usage. Increased on-dock rail usage due to expanded rail yard is assumed to be as follows:

+ Year 2005
  - Eastbound: 10.9 percent (of total throughput)
  - Westbound: 8.6 percent (includes 3 percent westbound empties)
+ Year 2015
  - Eastbound: 11.4 percent (of total throughput)
  - Westbound: 8.9 percent (includes 3 percent westbound empties)
+ Year 2030
  - Eastbound: 9.9 percent (of total throughput)
  - Westbound: 7.1 percent (includes 3 percent westbound empties)
+ Year 2045
  - Eastbound: 9.9 percent (of total throughput)
  - Westbound: 7.1 percent (includes 3 percent westbound empties)

Weekend Terminal Operations. Weekend throughput is assumed to be 15 percent in 2005, 2015, 2030, and 2045.

The net increase in truck-trip generation includes the increased percent of cargo moved via the expanded on-dock rail facilities, as noted. An analysis of a rail yard capacity was conducted for the expanded terminal to ensure that the proposed new

rail yard could accommodate the projected on-dock container volumes. The proposed Project trip-generation estimates are summarized in Table 3.6-3. Note that TEU growth increases for future years, but peak-hour trips do not increase proportionately. This is because, in future years, on-dock rail usage will increase; and work shift splits change to shift more activity to the second shift and night shift and away from the day shift. Therefore, although total trips increase in 2005, 2015, 2030, and 2045, some of the increase occurs during off-peak periods due to the operating parameters described above. Due to changes in port operations in future years, peak hour truck trips are actually forecast to decline in some cases due to factors such as increased on-dock rail and the spreading of operating hours to off-peak as well as increased weekend operations and other factors.

Appendix F contains all of the CEQA baseline, NEPA baseline, and future conditions with proposed Project traffic forecasts and LOS calculation worksheets. Figure 3.6-2 illustrates the assumed trip-distribution percentages of proposed Project traffic. Trip distribution was based on data from the Port Transportation model, which is based upon truck driver origin/destination surveys (actual surveys of truck drivers at the gates), as well as from Longshore Worker place of residence data.

Tables 3.6-4, 3.6-5, 3.6-6, and 3.6-7 summarize the CEQA baseline and future proposed Project intersection operating conditions at each study intersection for the 2005, 2015, 2030, and 2045 scenarios, respectively. The CEQA baseline and proposed Project intersection operating conditions for each year were compared to determine the proposed Project and regional impacts, and then the impacts were assessed using the City of Los Angeles criteria for significant impacts.

CEQA Impact Determination

Based on the results of the traffic study as presented in Tables 3.6-4, 3.6-5, 3.6-6, and 3.6-7 and more fully set forth in Appendix F, the proposed Project would result in significant circulation system impacts at six study intersections, relative to baseline conditions without the proposed Project.

Specifically, the LOS at the Avalon Boulevard/Harry Bridges Boulevard intersection would experience a significant traffic impact during the p.m. peak hour in 2015, 2030, and 2045. Avalon Boulevard/Harry Bridges Boulevard would operate at LOS C during the p.m. peak hour in 2015 and 2030, and LOS D during the p.m. peak hour in 2045. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Alameda Street/Anaheim Street intersection would experience a significant traffic impact during the a.m. peak hour for 2015, and during both the a.m. and p.m. peak hours for 2030 and 2045. At 2015, Alameda Street/Anaheim Street would operate at LOS D for the a.m. peak hour. At 2030, Alameda Street/Anaheim Street would operate at LOS E for both the a.m. and p.m. peak hours. At 2045, Alameda Street/Anaheim Street would operate at LOS F for both the a.m. and p.m. peak hours. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

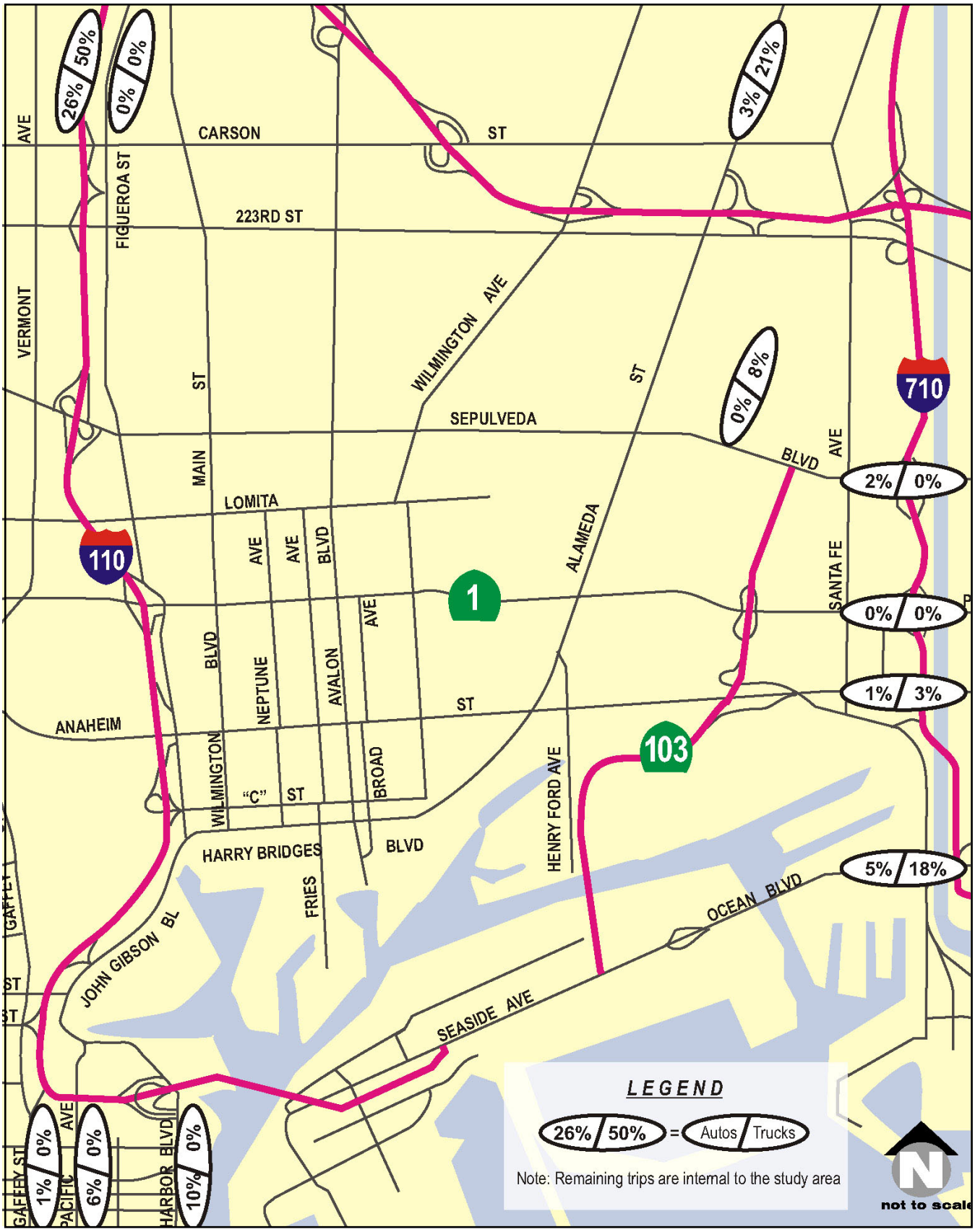

Figure 3.6-2
Project Trip Distribution
Berth 97-109
Container Terminal Project EIS/EIR

Source: Meyer, Mohaddes Associates, Inc., 2005

CH2MHILL

TB092007001SCO180121.01.04 CS_traff2 ai 3/08

Table 3.6-4. Intersection Level of Service Analysis – 2005 Proposed Project vs. 2005 Future Baseline

Study Intersection	Year 2005 Baseline				Year 2005 With Proposed Project				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-5. Intersection Level of Service Analysis – 2015 Proposed Project vs. 2015 Future Baseline

Study Intersection	Year 2015 Baseline				Year 2015 With Proposed Project				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.529	C	0.746	0.044	0.177	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	D	0.804	C	0.788	0.037	0.028	a.m.
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.825	0.001	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.337	A	0.457	0.008	0.024	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.690	D	0.870	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.631	C	0.728	0.036	0.117	p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.523	A	0.517	0.045	0.036	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.544	A	0.477	0.006	0.005	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.852	D	0.868	0.043	0.080	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.376	A	0.517	0.016	0.095	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.319	A	0.560	0.003	0.009	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.418	0.002	0.010	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.692	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.390	C	0.781	0.040	0.255	p.m.
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.691	C	0.762	0.004	0.014	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-6. Intersection Level of Service Analysis – 2030 Proposed Project vs. 2030 Future Baseline

Study Intersection	Year 2030 Baseline				Year 2030 With Proposed Project				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.607	C	0.780	0.037	0.177	p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.981	E	0.952	0.018	0.025	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.742	F	1.037	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.402	A	0.569	0.014	0.022	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.809	F	1.115	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.738	C	0.738	0.067	0.104	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.564	A	0.563	0.039	0.032	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.599	A	0.525	0.006	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.942	D	0.880	0.038	0.043	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.433	A	0.562	0.027	0.102	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.327	A	0.555	0.006	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.368	A	0.413	0.005	0.009	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.437	B	0.607	0.002	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.411	B	0.615	0.035	0.030	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.918	E	0.983	0.008	0.013	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-7. Intersection Level of Service Analysis – 2045 Proposed Project vs. 2045 Future Baseline

Study Intersection	Year 2045 Baseline				Year 2045 With Proposed Project				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.651	D	0.833	0.037	0.057	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.109	F	1.078	0.018	0.025	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.814	F	1.154	0.002	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.468	B	0.663	0.014	0.022	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.919	F	1.265	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.840	D	0.817	0.067	0.104	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.638	B	0.641	0.043	0.035	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.658	A	0.576	0.006	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.250	F	1.032	0.277	0.087	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.467	B	0.608	0.027	0.033	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.365	B	0.610	0.005	0.009	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.404	A	0.453	0.006	0.009	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.479	B	0.667	0.002	0.002	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.492	D	0.869	0.088	0.231	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.015	F	1.081	0.008	0.013	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

The John S. Gibson Boulevard/I-110 NB ramps intersection would experience significant project-related traffic during the p.m. peak hour for 2015, and during both the a.m. and p.m. peak hours for 2030 and 2045. At 2015, John S. Gibson Boulevard/I-110 NB ramps would operate at LOS C during the a.m. peak hour. At 2030, John S. Gibson Boulevard/I-110 NB ramps would operate at LOS C during both the a.m. and p.m. peak hours. At 2045, John S. Gibson Boulevard/I-110 NB ramps would operate at LOS D during both the a.m. and p.m. peak hours. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Fries Avenue/Harry Bridges Boulevard intersection would experience a significant traffic impact during both the a.m. and p.m. peak hours for 2015, 2030, and 2045. At 2015, Fries Avenue/Harry Bridges Boulevard would operate at LOS D for both the a.m. and p.m. peak hours. At 2030, Fries Avenue/Harry Bridges Boulevard would operate at LOS E for the a.m. peak hour, and LOS D for the p.m. peak hour. At 2045, Fries Avenue/Harry Bridges Boulevard would operate at LOS F for both the a.m. and p.m. peak hours. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Broad Avenue/Harry Bridges Boulevard intersection would experience a significant traffic impact during the p.m. peak hour for 2015 and 2045. At 2015, Broad Avenue/Harry Bridges Boulevard would operate at LOS C during the p.m. peak hour. At 2045, Broad Avenue/Harry Bridges Boulevard would operate at LOS D during the p.m. peak hour. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The Navy Way/Seaside Avenue intersection would experience a significant traffic impact during the p.m. peak hour for 2030 and 2045. At 2030, Navy Way/Seaside Avenue would operate at LOS E during the p.m. peak hour. At 2045, Navy Way/ Seaside Avenue would operate at LOS F during the p.m. peak hour. The level of Project-related traffic would exceed the City of Los Angeles threshold for significant impact.

The amount of Project-related traffic that would be added at all other study locations would not be of sufficient magnitude to meet or exceed the threshold of significance of the respective city. This includes some intersections that would operate in the future at LOS E or F, but the level of Project-related traffic would be small enough that it would not trigger a significant traffic impact, based on the established thresholds.

In summary, the following significant intersection impacts under CEQA are forecasted for the proposed Project:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. peak hour)
  John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Navy Way and Seaside Avenue – (p.m. peak hour)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
Navy Way and Seaside Avenue – (p.m. peak hour)

Therefore, the proposed Project would result in a significant traffic impact under CEQA.

Mitigation Measures

The following intersection mitigation measures would be implemented to mitigate the significant impact of Project-related traffic. Tables 3.6-8, 3.6-9, and 3.6-10 present the level-of-service results with implementation of the mitigation measures for 2015, 2030, and 2045, respectively.

MM TRANS-1: ***Avalon Boulevard and Harry Bridges Boulevard*** **– Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard. This measure shall be implemented by 2015.**

MM TRANS-2: ***Alameda Street and Anaheim Street*** **– Provide an additional eastbound through-lane on Anaheim Street. This measure shall be implemented by 2015.**

MM TRANS-3: ***John S. Gibson Boulevard and I-110 NB Ramps*** **– Provide an additional southbound and westbound right-turn lane on John S. Gibson Boulevard and I-110 NB ramps. Reconfigure the eastbound approach to one eastbound through-left-turn lane, and one eastbound through-right-turn lane. Provide an additional westbound right-turn lane with westbound right-turn overlap phasing. This measure shall be implemented by 2015.**

MM TRANS-4: ***Fries Avenue and Harry Bridges Boulevard*** **– Provide an additional westbound through-lane on Harry Bridges Boulevard. Provide an additional northbound, eastbound, and westbound right-turn lane on Fries Avenue and Harry Bridges Boulevard. This measure shall be implemented by 2015.**

MM TRANS-5: ***Broad Avenue and Harry Bridges Boulevard*** **– Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard. This measure shall be implemented by 2015.**

MM TRANS-6: ***Navy Way and Seaside Avenue*** **– Provide an additional eastbound through-lane on Seaside Avenue. Reconfigure the westbound approach to one left-turn lane and three through-lanes. This measure shall be implemented by 2030.**

Table 3.6-8. 2015 Intersection Level of Service Analysis – 2015 Proposed Project vs. 2015 Future Baseline

Study Intersection	Year 2015 Baseline				Year 2015 With Proposed Project				Year 2015 With Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.529	C	0.746	A	0.509	A	0.527
Alameda Street and Anaheim Street	C	0.767	C	0.760	D	0.804	C	0.788	B	0.667	B	0.699
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.825	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.337	A	0.457	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.690	D	0.870	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	A	0.595	B	0.611	B	0.631	C	0.728	A	0.585	A	0.587
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.523	A	0.517	—	—	—	—
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.544	A	0.477	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.852	D	0.868	C	0.718	C	0.730
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.376	A	0.517	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.316	A	0.551	A	0.319	A	0.560	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.418	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	—	—	—	—
John S. Gibson Boulevard and Channel Street	A	0.590	B	0.691	A	0.591	B	0.692	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.350	A	0.526	A	0.390	C	0.781	A	0.353	A	0.438
Navy Way and Seaside Avenue	B	0.687	C	0.748	B	0.691	C	0.762	—	—	—	—

Notes:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson Boulevard/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles signalized intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-9. 2030 Intersection Level of Service Analysis – 2030 Proposed Project vs. 2030 Future Baseline

Study Intersection	Year 2030 Baseline				Year 2030 With Project				Year 2030 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [(b)]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.607	C	0.780	A	0.536	A	0.555
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.981	E	0.952	D	0.808	D	0.848
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.742	F	1.037	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	0.388	A	0.547	A	0.402	A	0.569	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.809	F	1.115	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	B	0.671	B	0.634	C	0.738	C	0.738	B	0.672	B	0.610
Figueroa Street/C Street/I-110 Ramps [(b)]	A	0.525	A	0.531	A	0.564	A	0.563	—	—	—	—
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.599	A	0.525	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.942	D	0.880	D	0.822	C	0.766
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.433	A	0.562	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.321	A	0.547	A	0.327	A	0.555	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.363	A	0.404	A	0.368	A	0.413	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.437	B	0.607	—	—	—	—
John S. Gibson Boulevard and Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.376	A	0.585	A	0.411	B	0.615	—	—	—	—
Navy Way and Seaside Avenue	E	0.910	E	0.970	E	0.918	E	0.983	C	0.795	E	0.913

Notes:

[(a)] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[(b)] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson Boulevard/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles signalized intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-10. 2045 Intersection Level of Service Analysis – 2045 Proposed Project vs. 2045 Future Baseline

Study Intersection	Year 2045 Baseline				Year 2045 With Project				Year 2045 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.651	D	0.833	A	0.576	A	0.595
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.109	F	1.078	E	0.919	E	0.945
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.814	F	1.154	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.468	B	0.663	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.919	F	1.265	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	C	0.773	C	0.713	D	0.840	D	0.817	C	0.772	B	0.681
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.638	B	0.641	—	—	—	—
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.658	A	0.576	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.250	F	1.032	C	0.886	D	0.824
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.467	B	0.608	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.360	B	0.601	A	0.365	B	0.610	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.398	A	0.444	A	0.404	A	0.453	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.479	B	0.667	—	—	—	—
John S. Gibson Boulevard and Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.404	B	0.638	A	0.492	D	0.869	A	0.395	A	0.495
Navy Way and Seaside Avenue	F	1.007	F	1.068	F	1.015	F	1.081	D	0.873	F	1.001

Notes:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson Boulevard/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles signalized intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Residual Impact

Impacts would be less than significant under CEQA after implementation of the above mitigation measure.

Because **Mitigation Measures TRANS-1** through **TRANS-6** are largely striping projects that include minimal construction, implementation of **Mitigation Measures TRANS-1 through TRANS-6** will not result in significant secondary impacts. Additionally, striping work would be completed during off-peak hours to minimize impacts to traffic.

NEPA Impact Determination

Table 3.6-11 summarizes the TEU throughput for the NEPA baseline and proposed Project and the assumed operating parameters that were used to develop the trip generation forecasts. The net increase in truck trip generation accounts for the increased percent of cargo moved via the expanded on-dock rail facilities. Tables 3.6-12, 3.6-13, 3.6-14, and 3.6-15 summarize the NEPA baseline and proposed Project intersection operating conditions at each study intersection for the 2005, 2015, 2030 and 2045 scenarios, respectively.

The proposed Project measured against the NEPA baseline would result in adverse impacts based on the City of Los Angeles impact criteria. The level of impact would be similar or compared to the CEQA baseline. Six intersections would be adversely impacted based on comparison to the NEPA baseline, as follows:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. peak hour)
  John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Navy Way and Seaside Avenue – (p.m. peak hour)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
  Navy Way and Seaside Avenue – (p.m. peak hour)

Therefore, the proposed Project would result in a significant traffic impact under NEPA.

Table 3.6-11. Trip Generation Analysis Assumptions and Input Data for Berth 97-109 Terminal

Berth 97-109	NEPA Baseline				Proposed Project			
	2005	2015	2030	2045	2005	2015	2030	2045
Gross Acres	72	117	117	117	72	142	142	142
Resultant TEUs (annual)	403,200	631,800	632,500	632,500	403,200	1,164,400	1,551,100	1,551,100
Peak Month Factor [(1)]	0.091	0.091	0.083	0.083	0.091	0.091	0.083	0.083
Monthly TEUs	36,691	57,494	52,498	52,498	36,691	105,960	128,741	128,741
Key Trip Generation Model Input Factors								
Shift Split (%) (day/2nd/night)	80/10/10	80/10/10	60/20/20	60/20/20	80/10/10	80/10/10	60/20/20	60/20/20
On-Dock Rail %	20%	28%	28%	28%	20%	20%	17%	17%
% Double Cycle Trucks	35%	35%	45%	45%	35%	35%	45%	45%
Percentage of Weekly Gate Traffic Allocated to Weekend	15%	15%	15%	15%	15%	15%	15%	15%
Trip Generation Results – a.m. Peak								
Project Added Auto Trips	—	—	—	—	43	133	121	121
Project Added Truck Trips	—	—	—	—	78	225	201	201
Project Added Total Trips	—	—	—	—	121	358	322	322
Trip Generation Results – p.m. Peak								
Project Added Auto Trips	—	—	—	—	58	181	164	164
Project Added Truck Trips	—	—	—	—	111	320	214	214
Project Added Total Trips	—	—	—	—	169	501	378	378

Note: The trips generated for the Project represent incremental increases relative to the NEPA baseline.

[(1)] Peak month factor based on actual gate transaction data from all POLA/POLB container terminals where such data was available

Table 3.6-12. 2005 Intersection Level of Service Analysis – Proposed Project vs. NEPA Baseline

Study Intersection	2005 NEPA Baseline				Year 2005 With Proposed Project				Change in V/C		Adverse Impacts
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-13. 2015 Intersection Level of Service Analysis – Proposed Project vs. NEPA Baseline

Study Intersection	2015 NEPA Baseline				Year 2015 With Proposed Project				Change in V/C		Adverse Impacts
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.529	C	0.746	0.044	0.177	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	D	0.804	C	0.788	0.037	0.028	a.m.
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.825	0.001	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.337	A	0.457	0.008	0.024	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.690	D	0.870	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.631	C	0.728	0.036	0.117	p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.523	A	0.517	0.045	0.036	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.544	A	0.477	0.006	0.005	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.852	D	0.868	0.043	0.080	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.376	A	0.517	0.016	0.095	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.319	A	0.560	0.003	0.009	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.418	0.002	0.010	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.692	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.390	C	0.781	0.040	0.255	p.m.
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.691	C	0.762	0.004	0.014	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-14. 2030 Intersection Level of Service Analysis – Proposed Project vs. NEPA Baseline

Study Intersection	2030 NEPA Baseline				Year 2030 With Proposed Project				Change in V/C		Adverse Impacts
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.607	C	0.780	0.037	0.177	p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.981	E	0.952	0.018	0.025	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.742	F	1.037	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.402	A	0.569	0.014	0.022	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.809	F	1.115	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.738	C	0.738	0.067	0.104	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.564	A	0.563	0.039	0.032	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.599	A	0.525	0.006	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.942	D	0.880	0.038	0.043	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.433	A	0.562	0.027	0.102	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.327	A	0.555	0.006	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.368	A	0.413	0.005	0.009	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.437	B	0.607	0.002	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.411	B	0.615	0.035	0.030	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.918	E	0.983	0.008	0.013	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-15. 2045 Intersection Level of Service Analysis – Proposed Project vs. NEPA Baseline

Study Intersection	2045 NEPA Baseline				Year 2045 With Proposed Project				Change in V/C		Adverse Impacts
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.651	D	0.833	0.037	0.057	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.109	F	1.078	0.018	0.025	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.814	F	1.154	0.002	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.468	B	0.663	0.014	0.022	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.919	F	1.265	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.840	D	0.817	0.067	0.104	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.638	B	0.641	0.043	0.035	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.658	A	0.576	0.006	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.250	F	1.032	0.277	0.087	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.467	B	0.608	0.027	0.033	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.365	B	0.610	0.005	0.009	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.404	A	0.453	0.006	0.009	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.479	B	0.667	0.002	0.002	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.492	D	0.869	0.088	0.231	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.015	F	1.081	0.008	0.013	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Mitigation Measures

MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5, and **MM TRANS-6** would apply to the NEPA proposed Project impact determination.

Residual Impact

Impacts would be less than significant under NEPA after implementation of the above mitigation measures.

Impact TRANS-3: An increase in onsite employees due to proposed Project operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Although the proposed Project would result in additional onsite employees, the increase in work-related trips using public transit would be negligible. Port terminals generate extremely low transit demand for several reasons. The primary reason that Port workers do not use public transit is that many terminal workers must first report to union halls for dispatch before proceeding to the terminal to which they have been assigned. Most workers prefer to use a personal automobile to facilitate this disjointed travel pattern. In addition, Port workers live throughout the Southern California region and do not have access to the few bus routes that serve the Port. Additionally, Port workers' incomes are generally higher than similarly skilled jobs in other areas and higher incomes correlates to lower transit usage (Pucher and Renne, 2003). Finally, parking at the Port is readily available and free, which encourages workers to drive to work. Therefore, fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services. Observations of transit usage in the area for bus routes that serve the proposed Project area (MTA Routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

The proposed Project would result in a slightly higher employment level compared to the NEPA baseline due to in-water construction activities and increased throughput operations, but as discussed above, the increase in work-related trips using public transit would be negligible. Less than significant impacts under NEPA would occur.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-4: Proposed Project operations would result in a less than significant increase in freeway congestion.

CEQA Impact Determination

According to the CMP, Traffic Impact Analysis (TIA) Guidelines (Los Angeles Metropolitan Transportation Authority 2004 Congestion Management program for Los Angeles County), a traffic impact analysis is required at the following:

+ 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.
+ 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.

Per CMP guidelines, an increase of 0.02 or more in the D/C ratio with a resulting LOS F is deemed a significant impact.

The closest CMP arterial monitoring station to the proposed Project is Alameda Street/Pacific Coast Highway (PCH). The proposed Project would add 87 and 94 additional trips to the a.m. and p.m. peak hours, respectively, through this intersection in the 2030 and 2045 scenarios (the appendix includes the projected Project-related volumes through this intersection for the various analysis years and alternatives); therefore, CMP system analysis is required at this location. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/ Alameda Street. The analysis results indicate that the proposed Project would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F. The next closest CMP arterial monitoring stations are located at PCH and Figueroa Boulevard, PCH and Western Avenue and PCH and Santa Fe Avenue. The project would not add at least 50 trips through any of these locations, thus no CMP system analysis is required per County of Los Angeles CMP Program guidelines.

The closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that the proposed Project would result in 170 and 191 additional proposed Project trips for the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required at this location. The analysis results indicate that this intersection operates at LOS F for the p.m. peak hour in 2045. However, the V/C ratio would only increase by 0.011, below the 0.02 threshold according to the CMP guidelines. Therefore, there would be less than significant impacts at this location.

The results of the analysis indicate that the proposed Project would result in 34 and 39 additional proposed Project trips for the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F. The next closest CM freeway monitoring stations are at I-110 at Manchester Boulevard, I-405 at Carson Scales and I-710 at Willow Street. The project will not result in more than 150 additional trips at any of those locations; thus, no CMP freeway analysis is required at those locations.

Consequently, traffic impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

The closest CMP arterial monitoring station to the proposed Project is Alameda Street/Pacific Coast Highway (PCH). The proposed Project would add 87 trips through this intersection in the 2030 and 2045 scenarios; therefore, CMP system analysis is required at this location. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south and east-west through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. The analysis results indicate that the proposed Project would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

The closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that the proposed Project would result in 170 and 191 additional proposed Project trips for the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required at this location. The analysis results indicate that this intersection will operate at LOS F for the p.m. peak hour in 2045. However, the V/C ratio would only increase by 0.011, below the 0.02 threshold according to the CMP guidelines. Therefore, there would be less than significant impacts at this location.

The results of the analysis indicate that the proposed Project would result in 34 and 39 additional proposed Project trips for the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-5: Proposed Project operations would cause an increase in rail activity, causing delays in regional traffic.

CEQA Impact Determination

Rail activity causes delay at at-grade crossings where the trains pass and cause auto and truck traffic to stop. The amount of delay is related to the length of the train, the speed of the train and the amount of auto and truck traffic that is blocked. The proposed Project would cause an increase in either the number of trains or the amount of auto and truck traffic; however, the increase in auto and truck traffic would only affect some of the at-grade crossings. In the case of this proposed Project, the affected at-grade crossings are at Avalon Boulevard and Henry Ford Avenue. The grade crossing at Fries Avenue would be eliminated as part of the South Wilmington Grade Separation project.

The proposed Project would not have any significant impact on regional rail corridors north of the proposed Project site since the Alameda Corridor project has been completed. The completion of the corridor has eliminated all of the regional at-grade rail/highway crossings between the Port and the downtown rail yards; therefore, there would be no change in vehicular delay at any of those crossings due to Project-related rail activity (they are now all grade separated).

The Project will not cause significant rail-related impacts on lines that lead north or east of the downtown rail yards. Rail trips are not controlled by the Port. Currently, the unit trains built at the on-dock and near dock facilities can be picked up by BNSF and/or UP. Both rail companies use the Alameda Corridor to travel to the downtown rail yards. To the east of the downtown rail yards, some of the trains are broken down, reconfigured and otherwise modified at the location of the downtown rail yards from that point to the east. Other trains remain unit trains through the downtown rail yard; there are approximately nine major routes with a number of subroutes that the trains can take to leave the state. The rail operators, and not the Port, make the choice of what routes the trains will take, the day they will move and the time of day the trains will move. Furthermore, the rail mainline tracks were designed and built to accommodate the anticipated rail activity in the region. Rail volumes on the mainline are controlled and limited by the capacity of the mainline itself, thus by definition the project's trains could not traverse the mainline unless it still has remaining capacity. The number of trains generated by the project would not cause the mainline rail tracks to exceed the regional capacity. Once the regional mainline rail track capacity would be exceeded due to increases in regional rail activity, separate environmental studies on the mainline expansion would be undertaken by the rail companies, not by each shipper or carrier generating rail volumes.

Thus, rail-related impacts due to the proposed Project are limited to the at-grade crossings that are located south of the downtown rail yards, and are focused on the at-grade crossings on local lines in and near the Port.

Between the proposed Project rail yards and the beginning of the corridor, there are two local grade crossings (Avalon Boulevard and Henry Ford Avenue). The rail impact analysis is based on peak hour vehicle delay at those two affected rail crossings. Although proposed Project operations alone would not result in an additional train during the peak hour on a regular basis, it is possible that the cumulative development of the West Basin (Berths 97-109, Berths 121-131, Berth 136-147) may together result in an added train during the peak hour. Therefore, it is assumed that one additional train would occur during the peak hour. This is a very conservative analysis methodology since the proposed Project itself would not regularly result in a full train added during the peak hour.

An additional train would result in additional vehicle delay at the two crossing locations. Vehicular traffic must stop at these crossings and wait while the trains pass by, and the duration of the traffic delay is dependent upon the speed and length of the train. For example, a typical train in the Port is a 28-car train and is approximately 8,760 feet long and travels at an average speed of about 14 km per hour (9 miles per hour) outside the port. Assuming that the automatic gates at each crossing would close 28 seconds prior to the arrival of a train and that they would open 8 seconds after the train clears the crossing, each train passage would block a given street for 11.7 minutes. These assumptions are based on typical train lengths and speeds that occur in the Port.

The severity of impact created by a train blockage depends upon the time of day that the blockage occurs and, correspondingly, the volume of traffic that is affected by the blockage. For example, if a blockage occurs during the peak periods of traffic flow, the resulting delays and the number of stopped vehicles would be greater than if the blockage occurred at a non-peak time. Also, the total amount of delay would be greater at locations with high traffic volumes compared to low-volume locations because the train crossing would stop more vehicles.

For this analysis, the following formula has been used to determine the amount of delay at each crossing for each train passage.

$$Delay = \left(\frac{Tb^2 \times q \times nl}{2 \times 60 \times \left(1 - \frac{q}{25}\right)} \right) \times f$$

Where:

Tb = gate blockage time in minutes
q = average arrival rate in vehicles per minute per lane
f = train frequency in trains per hour
nl = number of lanes

This formula has been applied to the two "public" railroad crossings between the proposed Project and beginning of the corridor (crossings internal to port terminals that do not serve public roadways are not assessed in this study). Since the average arrival rate for vehicles is dependent upon the time of day that the train movement occurs, it has been assumed that the train movements occur throughout the 24-hour day and that the probability of a blockage during any particular hour is 1:24, which represents an even distribution of train movements. For the peak hour, one train is assumed, which is a conservative assumption since there would not be a train on many days during the peak hour.

Total traffic delays at each individual grade crossing were computed for the a.m. and p.m. peak hours. This is the worst case, since many train movements would occur outside the peak hours. There are no adopted or standard guidelines for determining whether an impact due to rail blockage of a roadway is significant. In the case of the proposed Project, the two at-grade crossings are located on relatively low-volume minor arterial roadways, which serve primarily port traffic.

Table 3.6-16 summarizes the vehicle delay that is anticipated at the crossings due to the proposed Project rail activity during the peak hours. As shown, the delay calculations were performed at crossings at Avalon Boulevard and Henry Ford Avenue. The results indicate that the added average vehicle delay would range up to a maximum of 97 seconds per vehicle at Henry Ford Avenue with the proposed Project. Average vehicle delay is the average of all vehicles at the crossing during the assessed timer period. Thus, some vehicles will not experience any delay since they will arrive just as the gate is rising and some will experience more delay if they arrive just as the gate if coming down at the beginning of the crossing. The average represents all vehicles at the crossing during the time the train passes and the gate is going down, is down and is rising back up. Based on the threshold of significance of

55 seconds of average vehicle delay, the project would have a significant impact at both locations.

Mitigation Measures

There would be a significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

Table 3.6-16. Rail Crossing Vehicle Delay Due to Proposed Project

a.m. Peak Hour				
	Average Delay **per Vehicle** (sec/veh)			
Rail Crossing	Year 2005	Year 2015	Year 2030	Year 2045
1. Avalon Boulevard (With Project)	71	72	72	72
2. Henry Ford Avenue (With Project)	79	82	86	88

p.m. Peak Hour				
	Average Delay **per Vehicle** (sec/veh)			
Rail Crossing	Year 2005	Year 2015	Year 2030	Year 2045
1. Avalon Boulevard (With Project)	74	74	75	75
2. Henry Ford Avenue (With Project)	82	86	93	97

NEPA Impact Determination

Based on the threshold of significance of 55 seconds of average vehicle delay, the project would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the Project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

3.6.3.3.2 Alternatives

3.6.3.3.2.1 Alternative 1 – No Project Alternative

Alternative 1 would use the terminal site constructed as part of Phase I for container storage. Because of this, the Phase I construction activities are included under Alternative 1, although the in-water Phase I elements would be abandoned.

As described in Chapter 2, Alternative 1 would include the operation of 72 acres of backlands area for storage of containers and use of the internal road to transport containers between Berths 121-131 and Berths 97-109. The Catalina Express Terminal would not be relocated under Alternative 1.

Impact TRANS-1: Construction would result in a short-term, temporary increase in truck and auto traffic.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 1 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation measure is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

The impacts of this 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

A residual impact determination is not applicable.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 1 would not significantly impact the study intersection volume/capacity ratios, or level of service.

CEQA Impact Determination

Alternative 1 future traffic conditions for the years 2005, 2015, 2030 and 2045 were estimated by adding traffic from proposed local development projects, from regional traffic growth, and traffic increases resulting from Port terminal throughput growth, which is not attributable to the Project, to the CEQA 2000 baseline traffic volumes. Under Alternative 1, up to 457,100 TEUs from the Yang Ming Terminal could be

stored on the 72 acres of backlands. No ship calls would occur at Berths 97-109 under this alternative. Additionally, because the Berth 121-131 terminal is berth limited, use of Berths 97-109 by Yang Ming will not result in additional ship, truck, or rail trips at the Berth 121-131 terminal. This alternative, however, would result in daily yard tractor trips transporting the containers to and from Berths 97-109 (via the internal road connecting the two terminals and not affecting public streets in any way) and terminal equipment to sort and store containers at Berths 97-109. Table 3.6-17 summarizes the TEU throughput for the CEQA baseline and No Project Alternative and also the assumed operating parameters that were used to develop the trip generation forecasts. Traffic generated by Alternative 1 was estimated to determine potential impacts of this alternative on study area roadways.

Appendix F contains all of the future baseline, CEQA baseline, NEPA baseline and the No Project Alternative traffic forecasts and LOS calculation worksheets.

Tables 3.6-18, 3.6-19, 3.6-20, and 3.6-21 summarize the CEQA baseline and the No Project Alternative intersection operating conditions at each study intersection for the 2005, 2015, 2030, and 2045 scenarios, respectively. 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 City of Los Angeles criteria for significant impacts.

Based on the results of the traffic study as presented in Tables 3.6-18, 3.6-19, 3.6-20, and 3.6-21, the No Project Alternative would not result in any significant circulation system impacts at the study intersections, relative to CEQA baseline conditions.

Mitigation Measures

No mitigation required.

Residual Impact

No impact.

NEPA Impact Determination

The impacts of this 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

A residual impact determination is not applicable.

Table 3.6-17. Trip Generation Analysis Assumptions and Input Data for Berth 97-109 Terminal

Berth 97-109	CEQA Baseline	No Project			
	2000	2005	2015	2030	2045
Gross Acres	11	72	72	72	72
Resultant TEUs (annual)	45,135	403,200	432,000	457,100	457,100
Peak Month Factor	—	0.091	0.091	0.083	0.083
Monthly TEUs	4,313	36,691	39,312	37,939	37,939
Key Trip Generation Model Input Factors					
Shift Split (%) (day/2nd/night)	80/10/10	80/10/10	80/10/10	60/20/20	60/20/20
On-Dock Rail %	20%	20%	30%	28%	28%
% Double Cycle Trucks	45%	35%	35%	45%	45%
Percentage of Weekly Gate Traffic Allocated to Weekend	15%	15%	15%	15%	15%
Trip Generation Results – a.m. Peak					
Auto Trips Added under No Project	—	—	—	—	—
Truck Trips Added under No Project	—	—	—	—	—
Total Trips Added under No Project	—	—	—	—	—
Trip Generation Results – p.m. Peak					
Auto Trips Added under No Project	—	—	—	—	—
Truck Trips Added under No Project	—	—	—	—	—
Total Trips Added under No Project	—	—	—	—	—
Note: The trips generated for the No Project represent incremental increases relative to CEQA baseline.					

1

Table 3.6-18. 2005 Intersection Level of Service Analysis – Alternative 1 (No Project) vs. Future Baseline

Study Intersection	Year 2005 Future Baseline				Year 2005 With Alternative 1				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.496	A	0.559	0.000	0.000	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.413	A	0.493	0.000	0.000	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.631	B	0.626	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.675	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.7	B	11.9	0.0	0.0	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.882	F	1.135	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.548	A	0.531	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	31.3	F	59.5	0.0	0.0	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.505	A	0.445	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.361	A	0.462	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.260	A	0.350	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.548	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.357	A	0.406	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.508	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.306	A	0.460	0.000	0.000	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.528	A	0.588	0.000	0.000	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-19. 2015 Intersection Level of Service Analysis – Alternative 1 (No Project) vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 1				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.485	A	0.569	0.000	0.000	No
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.767	C	0.760	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.821	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.329	A	0.433	0.000	0.000	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.688	D	0.868	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	A	0.595	B	0.611	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.478	A	0.481	0.000	0.000	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.538	A	0.472	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.809	C	0.788	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.360	A	0.422	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.316	A	0.551	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.358	A	0.408	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.548	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.590	B	0.691	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.350	A	0.526	0.000	0.000	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.687	C	0.748	0.000	0.000	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-20. 2030 Intersection Level of Service Analysis – Alternative 1 (No Project) vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 1				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.570	B	0.603	0.000	0.000	No
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.963	E	0.927	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.740	F	1.034	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.388	A	0.547	0.000	0.000	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.807	F	1.113	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	B	0.671	B	0.634	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.525	A	0.531	0.000	0.000	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.593	A	0.521	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.904	D	0.837	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.406	A	0.460	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.321	A	0.547	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.363	A	0.404	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.435	B	0.606	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.765	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.376	A	0.585	0.000	0.000	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.910	E	0.970	0.000	0.000	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-21. 2045 Intersection Level of Service Analysis – Alternative 1 (No Project) vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 1				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.614	C	0.776	0.000	0.000	No
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.091	F	1.053	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.812	F	1.150	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.454	B	0.641	0.000	0.000	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.263	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	C	0.773	C	0.713	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	A	0.595	B	0.606	0.000	0.000	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.652	A	0.572	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	E	0.973	E	0.945	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.440	A	0.575	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.360	B	0.601	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.398	A	0.444	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.477	B	0.665	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.404	B	0.638	0.000	0.000	No
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.007	F	1.068	0.000	0.000	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Impact TRANS-3: An increase in onsite employees due to Alternative 1 operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Increase in work-related trips using public transit would be negligible. Port terminals generate extremely low transit demand for several reasons. The primary reason that Port workers do not use public transit is that many terminal workers must first report to union halls for dispatch before proceeding to the terminal to which they have been assigned. Most workers prefer to use a personal automobile to facilitate this disjointed travel pattern. Also, Port workers live throughout the Southern California region and do not have access to the few bus routes that serve the Port. Additionally, Port workers' incomes are generally higher than similarly skilled jobs in other areas and higher incomes correlates to lower transit usage (Pucher and Renne, 2003). Finally, parking at the Port is readily available and free, which encourages workers to drive to work. Therefore, fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services. Observations of transit usage in the area for bus routes that serve the proposed Project area (MTA Routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

The impacts of this 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

A residual impacts determination is not applicable.

Impact TRANS-4: Alternative 1 operations would not result in a significant increase in freeway congestion.

CEQA Impact Determination

According to the CMP, TIA Guidelines, a traffic impact analysis is required at the following:

+ 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.
+ 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.

Per CMP guidelines, an increase of 0.02 or more in the D/C ratio with a resulting LOS F is deemed a significant impact.

The closest CMP arterial monitoring station to Alternative 1 is Alameda Street/PCH. Alternative 1 would not result in additional truck and auto trips to the existing condition; therefore, no CMP system analysis is required at this location.

The closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. Alternative 1 would not result in additional truck and auto trips to the existing condition; therefore, no CMP system analysis is required at these locations. Therefore, there would be no impacts under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

No impact.

NEPA Impact Determination

The impacts of this 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

A residual impacts determination is not applicable.

Impact TRANS-5: Alternative 1 operations would not cause an increase in rail activity.

CEQA Impact Determination

There would be no additional rail delay due to this alternative and thus no impacts to rail crossings.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

The impacts of this 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

A residual impacts determination is not applicable.

3.6.3.3.2.2 Alternative 2 – No Federal Action Alternative

Alternative 2 would utilize the terminal site constructed as part of Phase I for container storage and would increase the backland area to 117 acres. Because of this, the Phase I construction activities are included under Alternative 2, although the in-water Phase I elements would not be used. The Phase I dike, fill, and the wharf would be abandoned.

The No Federal Action Alternative includes all of the construction and operational impacts likely to occur absent USACE permits (i.e., air emissions and traffic likely to occur without issuance of permits to modify wharves or dredge).

Impact TRANS-1: Construction would result in a short-term, temporary increase in truck and auto traffic.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 2 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation is required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Under this alternative, no further development would occur in the in-water terminal area (i.e., no additional dredging, dike or fill placement, pile installation, or wharf construction). In addition, backland development under Alternative 2 would be the same as under the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no substantial changes in the environmental conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation measures are necessary under NEPA.

Residual Impacts

No impact.

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

CEQA Impact Determination

Quantitative trip generation estimates were developed for Alternative 2 and compared to the CEQA baseline and the proposed Project. Traffic generated from Alternative 2 using the same QuickTrip trip generation model as used for the project would be lesser than the proposed Project and the same as the CEQA baseline. Table 3.6-22 illustrates the trip generation potential of Alternative 2. As Tables 3.6-23, 3.6-24, 3.6-25, and 3.6-26 show, Alternative 2 would generate fewer trips than the proposed Project in 2005, 2015, 2030, and 2045. Alternative 2 would also generate fewer total train movements than the proposed Project.

Table 3.6-22. Trip Generation Analysis – Alternative 2

	a.m. Peak				p.m. Peak			
	2005	2015	2030	2045	2005	2015	2030	2045
CEQA Baseline (Year 2000 – China Shipping)								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
NEPA – No Federal Action at China Shipping								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
Proposed Project (China Shipping)								
Autos	48	138	126	126	65	188	171	171
Trucks	87	249	286	286	124	355	309	309
Total	135	387	412	412	189	543	480	480
Alternative 2								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20

Table 3.6-23. 2005 Intersection Level of Service Analysis – Alternative 2 vs. Future Baseline

Study Intersection	Year 2005 Baseline				Year 2005 With Alternative 2				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.496	A	0.559	0.000	0.000	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.413	A	0.493	0.000	0.000	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.631	B	0.626	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.675	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.7	B	11.9	0.0	0.0	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.882	F	1.135	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.548	A	0.531	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	31.3	F	59.5	0.0	0.0	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.505	A	0.445	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.361	A	0.462	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.260	A	0.350	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.548	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.357	A	0.406	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.508	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.306	A	0.460	0.000	0.000	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.528	A	0.588	0.000	0.000	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-24. 2015 Intersection Level of Service Analysis – Alternative 2 vs. Future Baseline

Study Intersection	Year 2015 Baseline				Year 2015 With Alternative 2				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.485	A	0.569	0.000	0.000	No
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.767	C	0.760	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.821	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.329	A	0.433	0.000	0.000	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.688	D	0.868	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	A	0.595	B	0.611	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.478	A	0.481	0.000	0.000	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.538	A	0.472	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.809	C	0.788	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.360	A	0.422	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.316	A	0.551	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.358	A	0.408	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.548	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.590	B	0.691	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.350	A	0.526	0.000	0.000	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.687	C	0.748	0.000	0.000	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-25. 2030 Intersection Level of Service Analysis – Alternative 2 vs. Future Baseline

Study Intersection	Year 2030 Baseline				Year 2030 With Alternative 2				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.570	B	0.603	0.000	0.000	No
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.963	E	0.927	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.740	F	1.034	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.388	A	0.547	0.000	0.000	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.807	F	1.113	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	B	0.671	B	0.634	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.525	A	0.531	0.000	0.000	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.593	A	0.521	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.904	D	0.837	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.406	A	0.460	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.321	A	0.547	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.363	A	0.404	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.435	B	0.606	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.765	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.376	A	0.585	0.000	0.000	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.910	E	0.970	0.000	0.000	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-26. 2045 Intersection Level of Service Analysis – Alternative 2 vs. Future Baseline

Study Intersection	Year 2045 Baseline				Year 2045 With Alternative 2				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.614	C	0.776	0.000	0.000	No
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.091	F	1.053	0.000	0.000	No
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.812	F	1.150	0.000	0.000	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.454	B	0.641	0.000	0.000	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.263	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	C	0.773	C	0.713	0.000	0.000	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	A	0.595	B	0.606	0.000	0.000	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.652	A	0.572	0.000	0.000	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	E	0.973	E	0.945	0.000	0.000	No
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.440	A	0.575	0.000	0.000	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.360	B	0.601	0.000	0.000	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.398	A	0.444	0.000	0.000	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.477	B	0.665	0.000	0.000	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.404	B	0.638	0.000	0.000	No
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.007	F	1.068	0.000	0.000	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Mitigation Measures

No mitigation required.

Residual Impact

No impact.

NEPA Impact Determination

Backland development and operations under Alternative 2 would be the same as the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in the environmental conditions between Alternative 2 and the NEPA baseline operations.

Mitigation Measures

No mitigation measures are necessary under NEPA.

Residual Impacts

No impact.

Impact TRANS-3: An increase in onsite employees due to Alternative 2 operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Increase in work-related trips using public transit would be negligible. Port terminals generate extremely low transit demand for several reasons. The primary reason that Port workers do not use public transit is that many terminal workers must first report to union halls for dispatch before proceeding to the terminal to which they have been assigned. Most workers prefer to use a personal automobile to facilitate this disjointed travel pattern. Also, Port workers live throughout the Southern California region and do not have access to the few bus routes that serve the Port. Additionally, Port workers' incomes are generally higher than similarly skilled jobs in other areas and higher incomes correlates to lower transit usage (Pucher and Renne, 2003). Finally, parking at the Port is readily available and free, which encourages workers to drive to work. Therefore, fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services. Observations of transit usage in the area for bus routes that serve the proposed Project area (MTA Routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Backland development and operations under Alternative 2 would be the same as the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in the environmental conditions between Alternative 2 and the NEPA baseline operations.

Mitigation Measures

No mitigation measures are necessary under NEPA.

Residual Impacts

No impact.

Impact TRANS-4: Alternative 2 operations would not result in a significant increase in freeway congestion.

CEQA Impact Determination

According to the CMP TIA Guidelines, a traffic impact analysis is required at the following:

+ 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.
+ 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.

Per CMP guidelines, an increase of 0.02 or more in the D/C ratio with a resulting LOS F is deemed a significant impact.

The closest CMP arterial monitoring station to Alternative 2 is Alameda Street/PCH. Alternative 2 would not result in additional truck and auto trips to the existing condition; therefore, no CMP system analysis is required at this location.

The closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. Alternative 2 would not result in additional truck and auto trips to the existing condition; therefore, no CMP system analysis is required at these locations. Therefore, there would be no impacts under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

No impact.

NEPA Impact Determination

Backland development and operations under Alternative 2 would be the same as the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in the environmental conditions between Alternative 2 and the NEPA baseline operations.

Mitigation Measures

No mitigation measures are necessary under NEPA.

Residual Impacts

No impact.

Impact TRANS-5: Alternative 2 operations would not cause an increase in rail activity, causing delays in regional traffic.

CEQA Impact Determination

There would be no additional rail delay due to this alternative and thus no additional impacts to rail crossings.

Mitigation Measures

No mitigation required.

Residual Impacts

No impact.

NEPA Impact Determination

Backland development and operations under Alternative 2 would be the same as the NEPA baseline. There would be no additional rail delay due to this alternative and thus no additional impacts to rail crossings. Therefore, potential impacts under NEPA would not occur because there would be no net change in the environmental conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation measures are necessary under NEPA.

Residual Impacts

No impact.

3.6.3.3.2.3 Alternative 3 – No New Wharf Construction at Berth 102

This alternative would be developed similar to the proposed Project except that 925 linear feet of wharf proposed at Berth 102 would not be constructed. The total length of wharf at the terminal would be 1,575 feet, i.e., the existing 1,200 feet of Berth 100 (already constructed during Phase I and officially put into operation on June 21, 2004) and the proposed 375-foot south extension. An additional 116,000 yd^3 of rock dike and 24,000 yd^3 of fill behind the dike would be required for the Berth 100 south extension.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 3 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Similar to CEQA Determination, impacts to the transportation system from construction-related traffic of Alternative 3 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 3 would significantly impact five study intersection volume/capacity ratios, or level of service.

CEQA Impact Determination

Quantitative trip generation estimates were developed for Alternative 3 using the same QuickTrip trip generation model as used for the proposed Project and compared to the CEQA baseline and the Project. Traffic generated from Alternative 3 would be less than for the proposed Project across all years of analysis and modes (truck and auto). Because Alternative 3 would have lower TEU throughput than the project, it would generate fewer truck movements to handle the containers and would require fewer employees due to the lower throughout. Table 3.6-27 illustrates the trip generation potential of Alternative 3 compared to the baselines and the proposed Project. Alternative 3 also would generate fewer total train movements and fewer total peak hour rail trips than the proposed Project. As Tables 3.6-28, 3.6-29, 3.6-30, and 3.6-31 show, Alternative 3 would generate fewer trips compared to the proposed Project in 2005, 2015, 2030, and 2045.

Table 3.6-27. Trip Generation Analysis – Alternative 3

	a.m. Peak				p.m. Peak			
	2005	2015	2030	2045	2005	2015	2030	2045
CEQA Baseline (Year 2000 – China Shipping)								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
NEPA – No Federal Action at China Shipping								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
Proposed Project (China Shipping)								
Autos	48	138	126	126	65	188	171	171
Trucks	87	249	286	286	124	355	309	309
Total	135	387	412	412	189	543	480	480
Alternative 3								
Autos	48	86	76	76	65	117	103	103
Trucks	87	144	160	160	124	205	173	173
Total	135	230	236	236	189	322	276	276

1

Table 3.6-28. 2005 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2005 Baseline				Year 2005 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-29. 2015 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2015 Baseline				Year 2015 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.506	C	0.718	0.021	0.149	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.785	C	0.774	0.018	0.014	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.823	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.333	A	0.446	0.004	0.013	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.689	D	0.869	0.001	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.615	B	0.671	0.020	0.060	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.501	A	0.499	0.023	0.018	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.542	A	0.476	0.004	0.004	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.831	D	0.813	0.022	0.025	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.369	A	0.498	0.009	0.076	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.318	A	0.555	0.002	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.359	A	0.413	0.001	0.005	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.549	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	0.001	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.371	A	0.545	0.021	0.019	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.689	C	0.755	0.002	0.007	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-30. 2030 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2030 Baseline				Year 2030 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.589	B	0.624	0.019	0.021	No
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.972	E	0.939	0.009	0.012	p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.036	0.001	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.396	A	0.558	0.008	0.011	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.114	0.001	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.706	B	0.687	0.035	0.053	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.545	A	0.547	0.020	0.016	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.597	A	0.524	0.004	0.003	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.923	D	0.859	0.019	0.022	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.420	A	0.481	0.014	0.021	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.324	A	0.551	0.003	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.366	A	0.408	0.003	0.004	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.607	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.393	A	0.600	0.017	0.015	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.914	E	0.977	0.004	0.007	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-31. 2045 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2045 Baseline				Year 2045 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.633	D	0.807	0.019	0.031	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.100	F	1.065	0.009	0.012	p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.152	0.001	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.462	B	0.653	0.008	0.012	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.918	F	1.264	0.001	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.808	C	0.766	0.035	0.053	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.616	B	0.624	0.021	0.018	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.655	A	0.575	0.003	0.003	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.231	F	1.017	0.258	0.072	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.454	A	0.592	0.014	0.017	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.363	B	0.605	0.003	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.401	A	0.448	0.003	0.004	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.666	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.417	D	0.831	0.013	0.193	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.011	F	1.075	0.004	0.007	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

The following significant intersection impacts under CEQA are forecasted for Alternative 3:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2030 – Alameda Street and Anaheim Street – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street (p.m. peak hour)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

Therefore, Alternative 3 would result in a significant traffic impact under CEQA.

Mitigation Measures

Intersection **MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4,** and **MM TRANS-5** would be implemented to mitigate the significant impact of Project-related traffic. Tables 3.6-32, 3.6-33, and 3.6-34 present the level-of-service results with implementation of the mitigation measures for 2015, 2030, and 2045, respectively.

Residual Impact

Impacts would be less than significant under CEQA after implementation of the above mitigation measures.

Table 3.6-32. 2015 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 3				Year 2015 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [(b)]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.506	C	0.718	A	0.491	A	0.513
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.785	C	0.774	—	—	—	—
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.823	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	0.329	A	0.433	A	0.333	A	0.446	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.689	D	0.869	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	A	0.595	B	0.611	B	0.615	B	0.671	—	—	—	—
Figueroa Street/C Street/I-110 Ramps [(b)]	A	0.478	A	0.481	A	0.501	A	0.499	—	—	—	—
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.542	A	0.476	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.831	D	0.813	C	0.718	C	0.713
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.369	A	0.498	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.316	A	0.551	A	0.318	A	0.555	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.358	A	0.408	A	0.359	A	0.413	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.549	—	—	—	—
John S. Gibson Boulevard and Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.350	A	0.526	A	0.371	A	0.545	—	—	—	—
Navy Way and Seaside Avenue	B	0.687	C	0.748	B	0.689	C	0.755	—	—	—	—

Note:

[(a)] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[(b)] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-33. 2030 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 3				Year 2030 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.589	B	0.624	—	—	—	—
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.972	E	0.939	C	0.800	D	0.838
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.036	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.396	A	0.558	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.114	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	B	0.671	B	0.634	C	0.706	B	0.687	—	—	—	—
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.545	A	0.547	—	—	—	—
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.597	A	0.524	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.923	D	0.859	D	0.822	C	0.751
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.420	A	0.481	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.321	A	0.547	A	0.324	A	0.551	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.363	A	0.404	A	0.366	A	0.408	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.607	—	—	—	—
John S. Gibson Boulevard and Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.376	A	0.585	A	0.393	A	0.600	—	—	—	—
Navy Way and Seaside Avenue	E	0.910	E	0.970	E	0.914	E	0.977	—	—	—	—

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-34. 2045 Intersection Level of Service Analysis – Alternative 3 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 3				Year 2045 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.633	D	0.807	A	0.561	A	0.583
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.100	F	1.065	E	0.910	E	0.935
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.152	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.462	B	0.653	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.918	F	1.264	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	C	0.773	C	0.713	D	0.808	C	0.766	C	0.756	B	0.656
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.616	B	0.624	—	—	—	—
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.655	A	0.575	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.231	F	1.017	D	0.886	D	0.809
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.454	A	0.592	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.360	B	0.601	A	0.363	B	0.605	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.398	A	0.444	A	0.401	A	0.448	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.666	—	—	—	—
John S. Gibson Boulevard and Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.404	B	0.638	A	0.417	D	0.831	A	0.379	A	0.480
Navy Way and Seaside Avenue	F	1.007	F	1.068	F	1.011	F	1.075	—	—	—	—

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

NEPA Impact Determination

Alternative 3 would result in the lower traffic rates, TEU throughput, and total peak hour rail trips than the proposed Project, which would be an increase over NEPA baseline conditions. Alternative 3 measured against the NEPA baseline would result in adverse impacts based on the City of Los Angeles impact criteria. Five intersections would be adversely impacted based on comparison to the NEPA baseline, as follows:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
+ 2030 – Alameda Street and Anaheim Street – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street (p.m. peak hour)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

Therefore, Alternative 3 would result in a significant traffic impact under NEPA.

Mitigation Measures

Intersections **MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4,** and **MM TRANS-5** would be implemented to mitigate the significant impact of Project-related traffic.

Residual Impact

As shown in Tables 3.6-35 (for 2005), 3.6-36 (for 2015), 3.6-37 (for 2030), and 3.6-38 (for 2045), impacts would be less than significant under NEPA after implementation of the above mitigation measures.

Table 3.6-35. 2005 Intersection Level of Service Analysis – Alternative 3 vs. NEPA Baseline

Study Intersection	2005 NEPA Baseline				Year 2005 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-36. 2015 Intersection Level of Service Analysis – Alternative 3 vs. NEPA Baseline

Study Intersection	2015 NEPA Baseline				Year 2015 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.506	C	0.718	0.021	0.149	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.785	C	0.774	0.018	0.014	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.823	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-ramp [a]	A	0.329	A	0.433	A	0.333	A	0.446	0.004	0.013	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.689	D	0.869	0.001	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.615	B	0.671	0.020	0.060	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.501	A	0.499	0.023	0.018	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.542	A	0.476	0.004	0.004	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.831	D	0.813	0.022	0.025	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.369	A	0.498	0.009	0.076	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.318	A	0.555	0.002	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.359	A	0.413	0.001	0.005	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.549	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	0.001	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.371	A	0.545	0.021	0.019	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.689	C	0.755	0.002	0.007	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-37. 2030 Intersection Level of Service Analysis – Alternative 3 vs. NEPA Baseline

Study Intersection	2030 NEPA Baseline				Year 2030 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.589	B	0.624	0.019	0.021	No
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.972	E	0.939	0.009	0.012	p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.036	0.001	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.396	A	0.558	0.008	0.011	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.114	0.001	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.706	B	0.687	0.035	0.053	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.545	A	0.547	0.020	0.016	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.597	A	0.524	0.004	0.003	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.923	D	0.859	0.019	0.022	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.420	A	0.481	0.014	0.021	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.324	A	0.551	0.003	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.366	A	0.408	0.003	0.004	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.607	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.393	A	0.600	0.017	0.015	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.914	E	0.977	0.004	0.007	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-38. 2045 Intersection Level of Service Analysis – Alternative 3 vs. NEPA Baseline

Study Intersection	2045 NEPA Baseline				Year 2045 With Alternative 3				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.633	D	0.807	0.019	0.031	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.100	F	1.065	0.009	0.012	p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.152	0.001	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.462	B	0.653	0.008	0.012	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.918	F	1.264	0.001	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.808	C	0.766	0.035	0.053	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.616	B	0.624	0.021	0.018	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.655	A	0.575	0.003	0.003	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.231	F	1.017	0.258	0.072	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.454	A	0.592	0.014	0.017	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.363	B	0.605	0.003	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.401	A	0.448	0.003	0.004	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.666	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.417	D	0.831	0.013	0.193	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.011	F	1.075	0.004	0.007	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Impact TRANS-3: An increase in onsite employees due to Alternative 3 operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Alternative 3 would result in less or equal to the number of employees as the proposed Project. Fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services. Observations of transit usage in the area for bus routes that serve the terminal area (MTA Routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

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

Mitigation Measures

No mitigation required.

Residual Impacts

There would be less than significant impacts.

Impact TRANS-4: Alternative 3 operations would result in a less than significant increase in freeway congestion.

CEQA Impact Determination

Alternative 3 would generate fewer total trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to but less severe than those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 3 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 3 would add 47 and 51 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore,

CMP system analysis is required at this location. Alternative 3 would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 3 would result in 93 and 105 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is not required.

The results of the analysis indicate that Alternative 3 would result in 18 and 22 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 3 would generate fewer total trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to but less severe than those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 3 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 3 would add 47 and 51 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore, CMP system analysis is required at this location. Alternative 3 would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 3 would result in 93 and 105 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is not required.

The results of the analysis indicate that Alternative 3 would result in 18 and 22 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-5: Alternative 3 operations would cause an increase in rail activity, causing delays in regional traffic.

CEQA Impact Determination

Similar to the proposed Project, the average vehicle delay from Alternative 3 operations would be greater than the threshold of significance of 55 seconds of average vehicle delay at the rail crossings of Avalon Boulevard and Henry Ford Avenue. Therefore, Alternative 3 would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

NEPA Impact Determination

Similar to the proposed Project scenario, the average vehicle delay from Alternative 3 operation would be greater than the threshold of significance of 55 seconds of average vehicle delay at the rail crossings of Avalon Boulevard and Henry Ford Avenue. Therefore, Alternative 3 would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

3.6.3.3.2.4 Alternative 4 – Reduced Fill No South Wharf Extension at Berth 100

This alternative would be similar to the proposed Project except that the proposed 375 feet of linear wharf proposed south of Berth 100 and 12 of the 25 acres of backland behind Berth 100 would not be constructed/developed. The total length of wharf at the terminal would be 2,125 feet. As part of the Phase I construction, 1,200 feet of wharf at Berth 100 has already been constructed and was officially put into operation on June 21, 2004. The dredging of 41,000 yd^3 of fill has already occurred as part of Phase I construction.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 4 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Similar to CEQA determination, impacts to the transportation system from construction-related traffic of Alternative 4 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 4 would significantly impact six study intersection volume/capacity ratios, or level of service.

CEQA Impact Determination

Quantitative trip generation estimates were developed for Alternative 4 using the same QuickTrip trip generation model as used for the proposed Project and compared to the CEQA baseline and the Project. Traffic generated from Alternative 4 would be less than or equal to the proposed Project across all years of analysis and modes (truck and auto). Because Alternative 4 would have lower TEU throughput than the proposed Project, it would generate fewer truck movements to handle the containers and would require fewer employees due to the lower throughput. Table 3.6-39 illustrates the trip generation potential of Alternative 4 compared to the baselines and the proposed Project. Alternative 4 also would generate fewer total train movements and fewer total peak-hour rail trips than the proposed Project.

Tables 3.6-40, 3.6-41, 3.6-42, and 3.6-43 show the forecasts of the intersection impacts under CEQA of Alternative 4 versus the future baseline.

Table 3.6-39. Trip Generation Analysis – Alternative 4

	a.m. Peak				p.m. Peak			
	2005	2015	2030	2045	2005	2015	2030	2045
CEQA Baseline (Year 2000 – China Shipping)								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
NEPA – No Federal Action at China Shipping								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
Proposed Project (China Shipping)								
Autos	48	138	126	126	65	188	171	171
Trucks	87	249	286	286	124	355	309	309
Total	135	387	412	412	189	543	480	480
Alternative 4								
Autos	48	126	112	112	65	171	153	153
Trucks	87	225	253	253	124	321	273	273
Total	135	351	365	365	189	492	426	426

Table 3.6-40. 2005 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2005 Future Baseline				Year 2005 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-41. 2015 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.524	C	0.740	0.039	0.171	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.800	C	0.785	0.033	0.025	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.825	0.001	0.004	No
Harbor Boulevard and SR-47 WB On-ramp [a]	A	0.329	A	0.433	A	0.336	A	0.455	0.007	0.022	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.690	D	0.869	0.002	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.628	C	0.715	0.033	0.104	p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.518	A	0.513	0.040	0.032	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.544	A	0.477	0.006	0.005	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.847	D	0.863	0.038	0.075	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.374	A	0.513	0.014	0.091	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.319	A	0.559	0.003	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.417	0.002	0.009	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.692	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.386	C	0.771	0.036	0.245	p.m.
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.690	C	0.761	0.003	0.013	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-42. 2030 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.602	C	0.774	0.032	0.171	p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.978	E	0.948	0.015	0.021	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.742	F	1.037	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.401	A	0.566	0.013	0.019	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.809	F	1.115	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.729	C	0.724	0.058	0.090	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.559	A	0.559	0.034	0.028	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.598	A	0.525	0.005	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.937	D	0.875	0.033	0.038	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.430	A	0.558	0.024	0.098	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.326	A	0.554	0.005	0.007	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.368	A	0.412	0.005	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.437	B	0.607	0.002	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.407	B	0.611	0.031	0.026	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.917	E	0.981	0.007	0.011	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-43. 2045 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.646	D	0.826	0.032	0.050	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.106	F	1.075	0.015	0.022	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.814	F	1.153	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.467	B	0.661	0.013	0.020	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.918	F	1.265	0.001	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.831	D	0.803	0.058	0.090	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.633	B	0.637	0.038	0.031	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.657	A	0.576	0.005	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.245	F	1.028	0.272	0.083	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.464	B	0.604	0.024	0.029	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.365	B	0.608	0.005	0.007	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.403	A	0.452	0.005	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.479	B	0.666	0.002	0.001	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.487	D	0.859	0.083	0.221	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.014	F	1.079	0.007	0.011	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

The following significant intersection impacts under CEQA are forecasted for Alternative 4:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Navy Way and Seaside Avenue – (p.m. peak hour)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
Navy Way and Seaside Avenue – (p.m. peak hour)

Therefore, Alternative 4 would result in a significant traffic impact under CEQA.

Mitigation Measures

Intersection **MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5, and MM TRANS-6** would be implemented to mitigate the significant impact of Project-related traffic. Tables 3.6-44, 3.6-45, and 3.6-46 present the level-of-service results with implementation of the mitigation measures for 2015, 2030, and 2045, respectively.

Residual Impact

Impacts would be less than significant under CEQA after implementation of the above mitigation measures.

Table 3.6-44. 2015 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 4				Year 2015 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.524	C	0.740	A	0.505	A	0.524
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.800	C	0.785	—	—	—	—
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.825	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.336	A	0.455	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.690	D	0.869	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	A	0.595	B	0.611	B	0.628	C	0.715	A	0.583	A	0.581
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.518	A	0.513	—	—	—	—
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.544	A	0.477	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.847	D	0.863	C	0.718	C	0.726
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.374	A	0.513	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.316	A	0.551	A	0.319	A	0.559	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.417	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	—	—	—	—
John S. Gibson Boulevard and Channel Street	A	0.590	B	0.691	A	0.591	B	0.692	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.350	A	0.526	A	0.386	C	0.771	A	0.349	A	0.434
Navy Way and Seaside Avenue	B	0.687	C	0.748	B	0.690	C	0.761	—	—	—	—

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-45. 2030 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 4				Year 2030 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.602	C	0.774	A	0.532	A	0.552
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.978	E	0.948	D	0.806	D	0.845
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.742	F	1.037	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.401	A	0.566	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.809	F	1.115	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	B	0.671	B	0.634	C	0.729	C	0.724	B	0.668	B	0.604
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.559	A	0.559	—	—	—	—
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.598	A	0.525	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.937	D	0.875	D	0.822	C	0.762
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.430	A	0.558	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.321	A	0.547	A	0.326	A	0.554	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.363	A	0.404	A	0.368	A	0.412	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.437	B	0.607	—	—	—	—
John S. Gibson Boulevard and Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.376	A	0.585	A	0.407	B	0.611	—	—	—	—
Navy Way and Seaside Avenue	E	0.910	E	0.970	E	0.917	E	0.981	C	0.795	E	0.912

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-46. 2045 Intersection Level of Service Analysis – Alternative 4 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 4				Year 2045 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.646	D	0.826	A	0.572	A	0.592
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.106	F	1.075	E	0.917	E	0.942
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.814	F	1.153	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.467	B	0.661	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.918	F	1.265	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	C	0.773	C	0.713	D	0.831	D	0.803	C	0.768	B	0.675
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.633	B	0.637	—	—	—	—
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.657	A	0.576	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.245	F	1.028	D	0.886	D	0.820
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.464	B	0.604	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.360	B	0.601	A	0.365	B	0.608	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.398	A	0.444	A	0.403	A	0.452	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.479	B	0.666	—	—	—	—
John S. Gibson Boulevard and Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.404	B	0.638	A	0.487	D	0.859	A	0.391	A	0.491
Navy Way and Seaside Avenue	F	1.007	F	1.068	F	1.014	F	1.079	D	0.873	E	1.000

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

NEPA Impact Determination

Alternative 4 would result in the lower traffic rates, TEU throughput, and total peak hour rail trips than the proposed Project, but would be an increase over NEPA baseline conditions. Alternative 4 measured against the NEPA baseline would result in adverse impacts based on the City of Los Angeles impact criteria. As indicated in Tables 3.6-47 (for 2005), 3.6-48 (for 2015), 3.6-49 (for 2030), and 3.6-50 (for 2045), six intersections would be adversely affected based on comparison to the NEPA baseline, as follows:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
+ 2030 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Navy Way and Seaside Avenue – (p.m. peak hour)
+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
  Navy Way and Seaside Avenue – (p.m. peak hour)

Therefore, Alternative 4 would result in a significant traffic impact under NEPA.

Mitigation Measures

Intersection **MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5, MM TRANS-6** would be implemented to mitigate the significant impact of Project-related traffic.

Residual Impact

Impacts would be less than significant under NEPA after implementation of the above mitigation measure.

Table 3.6-47. 2005 Intersection Level of Service Analysis – Alternative 4 vs. NEPA Baseline

Study Intersection	2005 NEPA Baseline				Year 2005 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-48. 2015 Intersection Level of Service Analysis – Alternative 4 vs. NEPA Baseline

Study Intersection	2015 NEPA Baseline				Year 2015 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.524	C	0.740	0.039	0.171	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.800	C	0.785	0.033	0.025	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.825	0.001	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.336	A	0.455	0.007	0.022	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.690	D	0.869	0.002	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.628	C	0.715	0.033	0.104	p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.518	A	0.513	0.040	0.032	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.544	A	0.477	0.006	0.005	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.847	D	0.863	0.038	0.075	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.374	A	0.513	0.014	0.091	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.319	A	0.559	0.003	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.417	0.002	0.009	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.692	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.386	C	0.771	0.036	0.245	p.m.
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.690	C	0.761	0.003	0.013	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-49. 2030 Intersection Level of Service Analysis – Alternative 4 vs. NEPA Baseline

Study Intersection	2030 NEPA Baseline				Year 2030 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.602	C	0.774	0.032	0.171	p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.978	E	0.948	0.015	0.021	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.742	F	1.037	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.401	A	0.566	0.013	0.019	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.809	F	1.115	0.002	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.729	C	0.724	0.058	0.090	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.559	A	0.559	0.034	0.028	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.598	A	0.525	0.005	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.937	D	0.875	0.033	0.038	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.430	A	0.558	0.024	0.098	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.326	A	0.554	0.005	0.007	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.368	A	0.412	0.005	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.437	B	0.607	0.002	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.655	C	0.766	0.001	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.407	B	0.611	0.031	0.026	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.917	E	0.981	0.007	0.011	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-50. 2045 Intersection Level of Service Analysis – Alternative 4 vs. NEPA Baseline

Study Intersection	2045 NEPA Baseline				Year 2045 With Alternative 4				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.646	D	0.826	0.032	0.050	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.106	F	1.075	0.015	0.022	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.814	F	1.153	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.467	B	0.661	0.013	0.020	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.918	F	1.265	0.001	0.002	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.831	D	0.803	0.058	0.090	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.633	B	0.637	0.038	0.031	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.657	A	0.576	0.005	0.004	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.245	F	1.028	0.272	0.083	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.464	B	0.604	0.024	0.029	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.365	B	0.608	0.005	0.007	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.403	A	0.452	0.005	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.479	B	0.666	0.002	0.001	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.487	D	0.859	0.083	0.221	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.014	F	1.079	0.007	0.011	p.m.

Note:

[a] signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Impact TRANS-3: An increase in onsite employees due to Alternative 4 operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Alternative 4 would result in approximately the same numbers of employees as the proposed Project. Fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services that would exceed the supply of such services. Observations of transit usage in the area for bus routes that serve the proposed Project area (MTA routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 4 would result in a slightly higher employment level compared to the NEPA baseline due to in-water construction activities and increased throughput operations, but as discussed above, the increase in work-related trips using public transit would be negligible. Less than significant impacts under NEPA would occur.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-4: Alternative 4 operations would result in a less than significant increase in freeway congestion.

CEQA Impact Determination

Alternative 4 would generate fewer total trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to but less severe than those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 4 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 4 would add 76 and 83 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore,

CMP system analysis is required at this location. Alternative 4 would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 4 would result in 150 and 168 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore CMP system analysis is required. The results of the analysis indicate that this intersection operates at LOS F for the p.m. peak hour. However, the V/C ratio would only increase by 0.010, below the 0.02 threshold according to the CMP guidelines. Therefore, there would be less than significant impacts at this location.

The results of the analysis indicate that Alternative 4 would result in 31 and 34 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 4 would generate fewer total trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to but less severe than those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 4 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 4 would add 76 and 83 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore, CMP system analysis is required at this location. Alternative 4 would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 4 would result in 150 and 168 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required. The results of the analysis indicate that this intersection operates at LOS F for the p.m. peak hour. However, the V/C ratio would only increase by 0.010, below the 0.02 threshold according to the CMP guidelines. Therefore, there would be less than significant impacts at this location.

The results of the analysis indicate that Alternative 4 would result in 31 and 34 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and

Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-5: Alternative 4 operations would cause an increase in rail activity, causing delays in regional traffic.

CEQA Impact Determination

Similar to the proposed Project scenario, the average vehicle delay from Alternative 4 operation would be greater than the threshold of significance of 55 seconds of average vehicle delay at the rail crossings of Avalon Boulevard and Henry Ford Avenue. Therefore, Alternative 4 would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the Project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

NEPA Impact Determination

Similar to the proposed Project scenario, the average vehicle delay from Alternative 4 operation would be greater than the threshold of significance of 55 seconds of average vehicle delay at the rail crossings of Avalon Boulevard and Henry Ford Avenue. Therefore, Alternative 4 would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the Project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

3.6.3.3.2.5 Alternative 5 – Reduced Construction and Operation (Phase I Construction Only)

Under Alternative 5, the Phase I terminal (completed in 2003 as allowed by the ASJ) would operate at levels similar to today. The total acreage of backlands under this alternative would be 72 acres. Existing equipment and facilities on the proposed Project site would remain, including four A-frame cranes along the wharf, the bridge connecting Berths 121-131 to Berths 97-109, the paved backlands used for container storage,

terminal and gate buildings, mobile equipment used to handle containers, and 1,200 linear feet of wharves and the 1.3 acres of fill associated with the wharf construction. Under this alternative, however, Phase II and Phase III construction elements would not be constructed, including the B102 wharf and the B100 south extension construction, six additional cranes, the second bridge connecting Berth 97-109 and Berth 121-131, and 70 additional terminal acres.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 5 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Similar to CEQA Determination, impacts to the transportation system from construction-related traffic of Alternative 5 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 5 would significantly impact one study intersection volume/capacity ratios, or level of service.

CEQA Impact Determination

Quantitative trip generation estimates were developed for Alternative 5 using the same QuickTrip trip generation model as used for the proposed Project and compared to the CEQA baseline and the Project. Traffic generated from Alternative 5 would be less than for the proposed Project across all years of analysis and modes (truck and auto). Because Alternative 5 would have lower TEU throughput than the project, it would generate fewer truck movements to handle the containers and would require fewer employees due to the lower throughout. Table 3.6-51 illustrates the trip generation potential of Alternative 5 compared to the baselines and the proposed Project. Alternative 5 also would generate fewer total train movements and fewer total peak-hour rail trips than the proposed Project.

Tables 3.6-52 (for 2005), 3.6-53 (for 2015), 3.6-54 (for 2030), and 3.6-55 (for 2045) show the forecasts of the intersection impacts under CEQA of Alternative 5 versus the future baseline.

Table 3.6-51. Trip Generation Analysis – Alternative 5

	a.m. Peak				p.m. Peak			
	2005	2015	2030	2045	2005	2015	2030	2045
CEQA Baseline (Year 2000 – China Shipping)								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
NEPA – No Federal Action at China Shipping								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
Proposed Project (China Shipping)								
Autos	48	138	126	126	65	188	171	171
Trucks	87	249	286	286	124	355	309	309
Total	135	387	412	412	189	543	480	480
Alternative 5								
Autos	48	58	50	50	65	80	70	70
Trucks	87	93	101	101	124	133	110	110
Total	135	151	151	151	189	213	180	180

Table 3.6-52. 2005 Intersection Level of Service Analysis – Alternative 5 vs. Future Baseline

Study Intersection	Year 2005 Future Baseline				Year 2005 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-53. 2015 Intersection Level of Service Analysis – Alternative 5 vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.495	A	0.586	0.010	0.017	No
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.775	C	0.767	0.008	0.007	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.822	0.000	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.331	A	0.439	0.002	0.006	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.689	D	0.868	0.001	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.606	B	0.643	0.011	0.032	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.490	A	0.490	0.012	0.009	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.541	A	0.475	0.003	0.003	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.820	D	0.802	0.011	0.014	No
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.365	A	0.488	0.005	0.066	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.317	A	0.553	0.001	0.002	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.358	A	0.411	0.000	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.549	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	0.001	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.356	A	0.536	0.006	0.010	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.688	C	0.751	0.001	0.003	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-54. 2030 Intersection Level of Service Analysis – Alternative 5 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.581	B	0.617	0.011	0.014	No
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.967	E	0.933	0.004	0.006	No
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.035	0.001	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.392	A	0.553	0.004	0.006	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.113	0.001	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	B	0.690	B	0.662	0.019	0.028	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.535	A	0.539	0.010	0.008	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.596	A	0.523	0.003	0.002	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.914	D	0.849	0.010	0.012	a.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.414	A	0.471	0.008	0.011	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.323	A	0.549	0.002	0.002	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.364	A	0.406	0.001	0.002	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.606	0.001	0.000	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.766	0.000	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.384	A	0.593	0.008	0.008	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.912	E	0.973	0.002	0.003	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-55. 2045 Intersection Level of Service Analysis – Alternative 5 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.625	C	0.794	0.011	0.018	No
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.095	F	1.059	0.004	0.006	No
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.151	0.001	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.458	B	0.647	0.004	0.006	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.264	0.000	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	C	0.792	C	0.740	0.019	0.027	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.606	B	0.615	0.011	0.009	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.654	A	0.574	0.002	0.002	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.222	F	1.009	0.249	0.064	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.448	A	0.584	0.008	0.009	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.361	B	0.603	0.001	0.002	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.400	A	0.446	0.002	0.002	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.665	0.001	0.000	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.411	B	0.646	0.007	0.008	No
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.009	F	1.071	0.002	0.003	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

The following significant intersection impacts under CEQA are forecasted for Alternative 5:

+ 2030 – Fries Avenue and Harry Bridges Boulevard – (a.m. peak hour)
+ 2045 – Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

Therefore, Alternative 5 would result in a significant traffic impact under CEQA.

Mitigation Measures

Intersection **MM TRANS-4** would be implemented to mitigate the significant impact of Project-related traffic. Tables 3.6-56 and 3.6-57 present the level-of-service results with implementation of the mitigation measures for 2030 and 2045, respectively.

Residual Impact

Impacts would be less than significant under CEQA after implementation of the above mitigation measure.

Table 3.6-56. 2030 Intersection Level of Service Analysis – Alternative 5 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 5				Year 2030 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.581	B	0.617	—	—	—	—
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.967	E	0.933	—	—	—	—
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.035	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.392	A	0.553	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.113	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	B	0.671	B	0.634	B	0.690	B	0.662	—	—	—	—
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.535	A	0.539	—	—	—	—
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.596	A	0.523	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.914	D	0.849	D	0.822	C	0.743
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.414	A	0.471	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.321	A	0.547	A	0.323	A	0.549	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.363	A	0.404	A	0.364	A	0.406	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.606	—	—	—	—
John S. Gibson Boulevard and Channel Street	B	0.654	C	0.765	B	0.654	C	0.766	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.376	A	0.585	A	0.384	A	0.593	—	—	—	—
Navy Way and Seaside Avenue	E	0.910	E	0.970	E	0.912	E	0.973	—	—	—	—

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-57. 2045 Intersection Level of Service Analysis – Alternative 5 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 5				Year 2045 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street and Harry Bridges Boulevard [(b)]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.625	C	0.794	—	—	—	—
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.095	F	1.059	—	—	—	—
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.151	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	0.454	B	0.641	A	0.458	B	0.647	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.264	—	—	—	—
John S. Gibson Boulevard and I-110 NB Ramps	C	0.773	C	0.713	C	0.792	C	0.740	—	—	—	—
Figueroa Street/C Street/I-110 Ramps [(b)]	A	0.595	B	0.606	B	0.606	B	0.615	—	—	—	—
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.654	A	0.574	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.222	F	1.009	D	0.886	D	0.801
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.448	A	0.584	—	—	—	—
ICTF Driveway No. 1 and Sepulveda Boulevard	A	0.360	B	0.601	A	0.361	B	0.603	—	—	—	—
ICTF Driveway No. 2 and Sepulveda Boulevard	A	0.398	A	0.444	A	0.400	A	0.446	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.665	—	—	—	—
John S. Gibson Boulevard and Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	—	—	—	—
Broad Avenue and Harry Bridges Boulevard	A	0.404	B	0.638	A	0.411	B	0.646	—	—	—	—
Navy Way and Seaside Avenue	F	1.007	F	1.068	F	1.009	F	1.071	—	—	—	—

Note:

[(a)] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[(b)] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

NEPA Impact Determination

Alternative 5 would result in the lower traffic rates, TEU throughput, and total peak hour rail trips than the proposed Project, which would be an increase over NEPA baseline conditions. Alternative 5 measured against the NEPA baseline would result in adverse impacts based on the City of Los Angeles impact criteria. As indicated in Tables 3.6-58 (for 2005), 3.6-59 (for 2015), 3.6-60 (for 2030), and 3.6-61 (for 2045), one intersection would be adversely impacted based on comparison to the NEPA baseline, as follows:

+ 2030 – Fries Avenue and Harry Bridges Boulevard – (a.m. peak hour)
+ 2045 – Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

Therefore, Alternative 5 would result in a significant traffic impact under NEPA.

Mitigation Measures

Intersection **MM TRANS-4** would be implemented to mitigate the significant impact of Project-related traffic.

Residual Impacts

Impacts would be less than significant under NEPA after implementation of the above mitigation measures.

Table 3.6-58. 2005 Intersection Level of Service Analysis – Alternative 5 vs. NEPA Baseline

Study Intersection	2005 NEPA Baseline				Year 2005 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.502	A	0.574	0.006	0.015	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.426	A	0.508	0.013	0.015	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.643	B	0.635	0.012	0.009	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.677	0.000	0.002	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.8	B	12.8	0.1	0.9	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.885	F	1.144	0.003	0.009	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.563	A	0.557	0.015	0.026	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.7	F	63.2	1.4	3.7	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.515	A	0.456	0.010	0.011	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.374	A	0.506	0.013	0.044	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.274	A	0.365	0.014	0.015	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.316	A	0.552	0.000	0.004	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.409	0.001	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.319	A	0.471	0.013	0.011	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.529	A	0.593	0.001	0.005	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-59. 2015 Intersection Level of Service Analysis – Alternative 5 vs. NEPA Baseline

Study Intersection	2015 NEPA Baseline				Year 2015 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.495	A	0.586	0.010	0.017	No
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.775	C	0.767	0.008	0.007	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.582	D	0.822	0.000	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.331	A	0.439	0.002	0.006	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.689	D	0.868	0.001	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.606	B	0.643	0.011	0.032	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.490	A	0.490	0.012	0.009	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.541	A	0.475	0.003	0.003	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.820	D	0.802	0.011	0.014	No
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.365	A	0.488	0.005	0.066	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.317	A	0.553	0.001	0.002	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.358	A	0.411	0.000	0.003	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.390	A	0.549	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	0.001	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.356	A	0.536	0.006	0.010	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.688	C	0.751	0.001	0.003	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-60. 2030 Intersection Level of Service Analysis – Alternative 5 vs. NEPA Baseline

Study Intersection	2030 NEPA Baseline				Year 2030 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	A	0.581	B	0.617	0.011	0.014	No
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.967	E	0.933	0.004	0.006	No
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.035	0.001	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.392	A	0.553	0.004	0.006	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.113	0.001	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	B	0.690	B	0.662	0.019	0.028	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.535	A	0.539	0.010	0.008	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.596	A	0.523	0.003	0.002	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.914	D	0.849	0.010	0.012	a.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.414	A	0.471	0.008	0.011	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.323	A	0.549	0.002	0.002	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.364	A	0.406	0.001	0.002	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.606	0.001	0.000	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.766	0.000	0.001	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.384	A	0.593	0.008	0.008	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.912	E	0.973	0.002	0.003	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-61. 2045 Intersection Level of Service Analysis – Alternative 5 vs. NEPA Baseline

Study Intersection	2045 NEPA Baseline				Year 2045 With Alternative 5				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.625	C	0.794	0.011	0.018	No
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.095	F	1.059	0.004	0.006	No
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.151	0.001	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.458	B	0.647	0.004	0.006	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.264	0.000	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	C	0.792	C	0.740	0.019	0.027	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.606	B	0.615	0.011	0.009	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.654	A	0.574	0.002	0.002	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.222	F	1.009	0.249	0.064	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.448	A	0.584	0.008	0.009	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.361	B	0.603	0.001	0.002	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.400	A	0.446	0.002	0.002	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.665	0.001	0.000	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.411	B	0.646	0.007	0.008	No
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.009	F	1.071	0.002	0.003	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Impact TRANS-3: An increase in onsite employees due to Alternative 5 operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Alternative 5 would result in approximately the same numbers of employees as the proposed Project. Fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services that would exceed the supply of such services. Observations of transit usage in the area for bus routes that serve the proposed Project area (MTA routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 5 would result in a slightly higher employment level compared to the NEPA baseline due to in-water construction activities and increased throughput operations, but as discussed above, the increase in work-related trips using public transit would be negligible. Less than significant impacts under NEPA would occur.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-4: Alternative 5 operations would result in a less than significant increase in freeway congestion.

CEQA Impact Determination

Alternative 5 would generate fewer total trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to but less severe than those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 5 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 5 would add 29 and 31 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore,

CMP system analysis is not required at this location. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 5 would result in 58 and 65 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is not required.

The results of the analysis indicate that Alternative 5 would result in 11 and 13 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 5 would generate fewer total trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to but less severe than those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 5 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 5 would add 29 and 31 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore, CMP system analysis is not required at this location. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 5 would result in 58 and 65 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is not required.

The results of the analysis indicate that Alternative 5 would result in 11 and 13 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-5: Alternative 5 operations would cause an increase in rail activity, causing delays in regional traffic.

CEQA Impact Determination

Similar to the proposed Project scenario, the average vehicle delay from Alternative 5 operation would be greater than the threshold of significance of 55 seconds of average vehicle delay at the rail crossings of Avalon Boulevard and Henry Ford Avenue. Therefore, Alternative 5 would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

NEPA Impact Determination

Similar to the proposed Project scenario, the average vehicle delay from Alternative 5 operation would be greater than the threshold of significance of 55 seconds of average vehicle delay at the rail crossings of Avalon Boulevard and Henry Ford Avenue. Therefore, Alternative 5 would have a significant impact at both locations.

Mitigation Measures

There would be significant, unavoidable transportation/circulation impact at the Henry Ford Avenue and Avalon Boulevard grade crossings as a result of the Project. No feasible mitigation is available.

Residual Impacts

Significant, unavoidable impacts.

3.6.3.3.2.6 Alternative 6 – Omni Cargo Terminal

The Omni Cargo Terminal Alternative would convert the existing site into an operating omni cargo-handling terminal similar to the Pasha Stevedoring & Terminals L. P. (Pasha) currently operating at Berths 174-181. The primary objective of the Omni Cargo Terminal Alternative is to provide increased and diversified cargo-handling capabilities by expanding and improving existing terminal facilities. The omni terminal would handle containers, Roll-On-Roll-Off and break-bulk commodities. Roll-On-Roll-Off goods include automobiles. Break-bulk commodities include factory equipment, forest products, bundles of steel, and other bulky material.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 6 would not be significant because worker travel would

not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

Similar to CEQA determination, impacts to the transportation system from construction-related traffic of Alternative 6 would not be significant because worker travel would not occur during peak hours and because peak-hour construction truck trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 6 would significantly impact six study intersection volume/capacity ratios, or level of service.

CEQA Impact Determination

Quantitative trip-generation estimates were developed for Alternative 6 and compared to the CEQA baseline and the proposed Project. This alternative includes a combination of container movements and movement of import automobiles and break-bulk commodities. For the container terminal portion, the trip generation is calculated in a similar manner to the project as described in section. For the break-bulk and automobile throughput, the estimated throughput in terms of automobile units and tons of break-bulk commodity is broken into the number of trucks required to move the tonnage at a assumed rate of 20 tons per truck. Traffic generated from Alternative 6 would be greater than the CEQA baseline but less than the proposed Project during 2005 and 2015 buildout years, and more than the proposed Project at year 2030 and 2045 during the a.m. peak hour. Table 3.6-62 illustrates the trip-generation potential of Alternative 6. As shown, in 2005 and 2015, Alternative 6 would generate fewer trips than the proposed Project. In 2030 and 2045, it would generate more trips in the a.m. peak hour but fewer trips during the p.m. peak hour compared to the proposed Project. Alternative 6 would generate more trips than the CEQA baseline in all years.

Tables 3.6-63 (for 2005), 3.6-64 (for 2015), 3.6-65 (for 2030), and 3.6-66 (for 2045) show the forecasts of the intersection impacts under CEQA of Alternative 6 versus the future baseline.

Table 3.6-62. Trip Generation Analysis – Alternative 6

	a.m. Peak				p.m. Peak			
	2005	2015	2030	2045	2005	2015	2030	2045
CEQA Baseline (Year 2000 – China Shipping)								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
NEPA – No Federal Action at China Shipping								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
Proposed Project (China Shipping)								
Autos	48	138	126	126	65	188	171	171
Trucks	87	249	286	286	124	355	309	309
Total	135	387	412	412	189	543	480	480
Alternative 6								
Autos	18	46	40	40	23	63	56	56
Trucks	96	268	388	388	94	257	303	303
Total	114	314	428	428	117	320	359	359

Table 3.6-63. 2005 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2005 Baseline				Year 2005 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.504	A	0.568	0.008	0.009	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.423	A	0.502	0.010	0.009	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.642	B	0.632	0.011	0.006	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.676	0.000	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.9	B	12.5	0.2	0.6	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.886	F	1.140	0.004	0.005	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.565	A	0.548	0.017	0.017	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.5	F	62.4	1.2	2.9	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.514	A	0.451	0.009	0.006	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.372	A	0.500	0.011	0.038	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.271	A	0.359	0.011	0.009	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.318	A	0.551	0.002	0.003	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.359	A	0.408	0.002	0.002	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.317	A	0.467	0.011	0.007	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.531	A	0.592	0.003	0.004	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-64. 2015 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2015 Baseline				Year 2015 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.516	C	0.716	0.031	0.147	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	D	0.801	C	0.781	0.034	0.021	a.m.
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.584	D	0.824	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.341	A	0.448	0.012	0.015	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.688	D	0.868	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.653	B	0.686	0.058	0.075	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.515	A	0.507	0.037	0.026	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.540	A	0.474	0.002	0.002	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.844	D	0.817	0.035	0.029	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.382	A	0.501	0.022	0.079	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.322	A	0.558	0.006	0.007	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.363	A	0.415	0.005	0.007	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	0.001	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.384	A	0.549	0.034	0.023	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.695	C	0.758	0.008	0.010	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-65. 2030 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2030 Baseline				Year 2030 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.611	C	0.762	0.041	0.159	p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.992	E	0.951	0.029	0.024	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.744	F	1.037	0.004	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.409	A	0.566	0.021	0.019	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.113	0.001	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.773	C	0.722	0.102	0.088	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.571	A	0.563	0.046	0.032	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.595	A	0.522	0.002	0.001	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.948	D	0.871	0.044	0.034	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.444	A	0.555	0.038	0.095	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.331	A	0.555	0.010	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.372	A	0.412	0.009	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.438	B	0.607	0.003	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.765	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.419	B	0.610	0.043	0.025	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.924	E	0.982	0.014	0.012	a.m., p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-66. 2045 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2045 Baseline				Year 2045 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.655	D	0.815	0.041	0.039	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.121	F	1.077	0.030	0.024	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.816	F	1.153	0.004	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.475	B	0.660	0.021	0.019	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.264	0.000	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.874	D	0.801	0.101	0.088	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.645	B	0.641	0.050	0.035	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.654	A	0.573	0.002	0.001	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.256	F	1.032	0.283	0.087	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.478	B	0.601	0.038	0.026	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.369	B	0.609	0.009	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.408	A	0.452	0.010	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.480	B	0.667	0.003	0.002	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.499	D	0.856	0.095	0.218	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.021	F	1.080	0.014	0.012	a.m., p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

The following significant intersection impacts under CEQA are forecasted for Alternative 6:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Navy Way and Seaside Avenue – (a.m. and p.m. peak hours)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
  Navy Way and Seaside Avenue – (a.m. and p.m. peak hours)

Therefore, Alternative 6 would result in a significant traffic impact under CEQA.

Mitigation Measures

Intersection **MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5** and **MM TRANS-6** would be implemented to mitigate the significant impact of Project-related traffic. Tables 3.6-67, 3.6-68, and 3.6-69 present the level-of-service results with implementation of the mitigation measures for 2015, 2030, and 2045, respectively.

Residual Impact

Impacts would be less than significant under CEQA after implementation of the above mitigation measure.

Table 3.6-67. 2015 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 6				Year 2015 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.516	C	0.716	A	0.506	A	0.522
Alameda Street and Anaheim Street	C	0.767	C	0.760	D	0.801	C	0.781	B	0.665	B	0.693
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.584	D	0.824	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.341	A	0.448	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.688	D	0.868	—	—	—	—
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.653	B	0.686	—	—	—	—
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.515	A	0.507	—	—	—	—
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.540	A	0.474	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.844	D	0.817	C	0.718	C	0.721
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.382	A	0.501	—	—	—	—
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.322	A	0.558	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.363	A	0.415	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	—	—	—	—
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	—	—	—	—
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.384	A	0.549	—	—	—	—
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.695	C	0.758	—	—	—	—

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-68. 2030 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 6				Year 2030 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.611	C	0.762	A	0.547	A	0.560
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.992	E	0.951	D	0.820	D	0.848
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.744	F	1.037	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.409	A	0.566	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.113	—	—	—	—
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.773	C	0.722	B	0.699	B	0.611
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.571	A	0.563	—	—	—	—
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.595	A	0.522	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.948	D	0.871	D	0.822	C	0.767
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.444	A	0.555	—	—	—	—
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.331	A	0.555	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.372	A	0.412	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.438	B	0.607	—	—	—	—
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.765	—	—	—	—
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.419	B	0.610	—	—	—	—
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.924	E	0.982	D	0.800	E	0.915

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-69. 2045 Intersection Level of Service Analysis – Alternative 6 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 6				Year 2045 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.655	D	0.815	A	0.588	A	0.599
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.121	F	1.077	E	0.932	E	0.945
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.816	F	1.153	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.475	B	0.660	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.264	—	—	—	—
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.874	D	0.801	C	0.799	B	0.682
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.645	B	0.641	—	—	—	—
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.654	A	0.573	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.256	F	1.032	D	0.886	D	0.825
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.478	B	0.601	—	—	—	—
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.369	B	0.609	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.408	A	0.452	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.480	B	0.667	—	—	—	—
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	—	—	—	—
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.499	D	0.856	A	0.406	A	0.496
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.021	F	1.080	D	0.878	F	1.003

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

NEPA Impact Determination

Alternative 6 measured against the NEPA baseline would result in adverse impacts based on the City of Los Angeles impact criteria. As indicated in Tables 3.6-70 (for 2005), 3.6-71 (for 2015), 3.6-72 (for 2030), and 3.6-73 (for 2045), six intersections would be adversely impacted based on comparison to the NEPA baseline, as follows:

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. peak hour)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
  Navy Way and Seaside Avenue – (a.m. and p.m. peak hours)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
  Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
  John S. Gibson and I-110 NB ramps – (a.m. and p.m. peak hours)
  Fries Avenue and Harry Bridges Boulevard (a.m. and p.m. peak hours)
  Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
  Navy Way and Seaside Avenue – (a.m. and p.m. peak hours)

Therefore, Alternative 6 would result in a significant traffic impact under NEPA.

Mitigation Measures

Intersection **MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5,** and **MM TRANS-6** would be implemented to mitigate the significant impact of Project-related traffic.

Residual Impact

Impacts would be less than significant under NEPA after implementation of the above mitigation measure.

Table 3.6-70. 2005 Intersection Level of Service Analysis – Alternative 6 vs. NEPA Baseline

Study Intersection	2005 NEPA Baseline				Year 2005 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.504	A	0.568	0.008	0.009	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.423	A	0.502	0.010	0.009	No
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.642	B	0.632	0.011	0.006	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.676	0.000	0.001	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	A	9.9	B	12.5	0.2	0.6	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.886	F	1.140	0.004	0.005	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	A	0.565	A	0.548	0.017	0.017	No
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	D	32.5	F	62.4	1.2	2.9	No
Pacific Avenue and Front Street	A	0.505	A	0.445	A	0.514	A	0.451	0.009	0.006	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.372	A	0.500	0.011	0.038	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.271	A	0.359	0.011	0.009	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.318	A	0.551	0.002	0.003	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.359	A	0.408	0.002	0.002	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	A	0.536	B	0.625	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.317	A	0.467	0.011	0.007	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.531	A	0.592	0.003	0.004	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-71. 2015 Intersection Level of Service Analysis – Alternative 6 vs. NEPA Baseline

Study Intersection	2015 NEPA Baseline				Year 2015 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	A	0.516	C	0.716	0.031	0.147	p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	D	0.801	C	0.781	0.034	0.021	a.m.
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.584	D	0.824	0.002	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.341	A	0.448	0.012	0.015	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	B	0.688	D	0.868	0.000	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	B	0.653	B	0.686	0.058	0.075	No
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	A	0.515	A	0.507	0.037	0.026	No
Pacific Avenue and Front Street	A	0.538	A	0.472	A	0.540	A	0.474	0.002	0.002	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	D	0.844	D	0.817	0.035	0.029	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.382	A	0.501	0.022	0.079	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.322	A	0.558	0.006	0.007	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.363	A	0.415	0.005	0.007	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.591	B	0.691	0.001	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.384	A	0.549	0.034	0.023	No
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.695	C	0.758	0.008	0.010	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-72. 2030 Intersection Level of Service Analysis – Alternative 6 vs. NEPA Baseline

Study Intersection	2030 NEPA Baseline				Year 2030 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	B	0.611	C	0.762	0.041	0.159	p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.992	E	0.951	0.029	0.024	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.744	F	1.037	0.004	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.409	A	0.566	0.021	0.019	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.808	F	1.113	0.001	0.000	No
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.773	C	0.722	0.102	0.088	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	A	0.571	A	0.563	0.046	0.032	No
Pacific Avenue and Front Street	A	0.593	A	0.521	A	0.595	A	0.522	0.002	0.001	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	E	0.948	D	0.871	0.044	0.034	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.444	A	0.555	0.038	0.095	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.331	A	0.555	0.010	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.372	A	0.412	0.009	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.438	B	0.607	0.003	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.654	C	0.765	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.419	B	0.610	0.043	0.025	No
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.924	E	0.982	0.014	0.012	a.m., p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-73. 2045 Intersection Level of Service Analysis – Alternative 6 vs. NEPA Baseline

Study Intersection	2045 NEPA Baseline				Year 2045 With Alternative 6				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	B	0.655	D	0.815	0.041	0.039	p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.121	F	1.077	0.030	0.024	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.816	F	1.153	0.004	0.003	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.475	B	0.660	0.021	0.019	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.917	F	1.264	0.000	0.001	No
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.874	D	0.801	0.101	0.088	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	B	0.645	B	0.641	0.050	0.035	No
Pacific Avenue and Front Street	B	0.652	A	0.572	B	0.654	A	0.573	0.002	0.001	No
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.256	F	1.032	0.283	0.087	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.478	B	0.601	0.038	0.026	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.369	B	0.609	0.009	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.408	A	0.452	0.010	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.480	B	0.667	0.003	0.002	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.749	D	0.869	0.000	0.000	No
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	A	0.499	D	0.856	0.095	0.218	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.021	F	1.080	0.014	0.012	a.m., p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Impact TRANS-3: An increase in onsite employees due to Alternative 6 operations would result in a less than significant increase in related public transit use.

CEQA Impact Determination

Alternative 6 would result in approximately the same numbers of employees as the proposed Project. Fewer than 10 work trips per day are expected to be made on public transit, which could easily be accommodated by existing bus transit services and would not result in a demand for transit services that would exceed the supply of such services. Observations of transit usage in the area for bus routes that serve the proposed Project area (MTA routes 446 and 447) revealed that the buses are currently not operating near capacity and would be able to accommodate this level of increase in demand without exceeding supply. Consequently, impacts due to additional demand on local transit services would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 6 would result in a slightly higher employment level compared to the NEPA baseline due to in-water construction activities and increased throughput operations, but as discussed above, the increase in work-related trips using public transit would be negligible. Less than significant impacts under NEPA would occur.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-4: Alternative 6 operations would result in a less than significant increase in freeway congestion.

CEQA Impact Determination

Alternative 6 would generate a similar number of trips when compared to the proposed Project, thus traffic impacts associated with this alternative would be similar to those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 6 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 6 would add 112 and 86 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore, CMP system analysis is required at this location. Alternative 6 would not result in

more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 6 would result in 200 and 158 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required. The results of the analysis indicate that this intersection operates at LOS F for the p.m. peak hour. However, the V/C ratio would only increase by 0.012, below the 0.02 threshold according to the CMP guidelines. Therefore, there would be less than significant impacts at this location.

The results of the analysis indicate that Alternative 6 would result in 43 and 34 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 6 would generate a similar number of trips when compared to the proposed Project; thus, traffic impacts associated with this alternative would be similar to those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 6 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 6 would add 112 and 86 additional project trips to the a.m. and p.m. peak hours, respectively, through this intersection; therefore, CMP system analysis is required at this location. Alternative 6 would not result in more than 0.02 increase in the V/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 6 would result in 200 and 158 additional project trips to the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required. The results of the analysis indicate that this intersection operates at LOS F for the p.m. peak hour. However, the V/C ratio would increase by only 0.012, below the 0.02 threshold according to the CMP guidelines. Therefore, there would be less than significant impacts at this location.

The results of the analysis indicate that Alternative 6 would result in 43 and 34 additional project trips to the a.m. and p.m. peak hours, respectively, at I-710 and

Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Consequently, traffic impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

Impact TRANS-5: Alternative 6 operations would not cause an increase in rail activity.

CEQA Impact Determination

Alternative 6 is not expected to generate any additional peak-hour train movements compared to the CEQA baseline. The Omni terminal would not utilize the on-dock rail yard at Berths 121-131 because it is assumed that the Omni terminal operator would be an entity other than West Basin Container Terminals and, therefore, would not have a contractual agreement to use the Berth 121-131 rail yard. Additionally, Omni terminals operate slightly different than container yards. The trains being built at Berth 121-131 are unit trains bound for one destination. Because the Omni terminal would handle much fewer containers than a container terminal, the Omni terminal would not have enough containers at one time to build unit train. Therefore, there are no forecast rail impacts associated with this alternative.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

NEPA Impact Determination

Alternative 6 is not expected to generate any additional peak-hour train movements compared to the NEPA baseline (it would not utilize the on-dock rail yard at Berths 121-131); therefore, there are no forecast rail impacts associated with this alternative.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impacts.

3.6.3.3.2.7 Alternative 7 – Nonshipping Use

Alternative 7 would utilize the terminal site constructed as part of Phase I for commercial and industrial uses and would increase the backland area to 117 acres. Because of this, the Phase I construction activities are included under Alternative 7, although the in-water Phase I elements would not be used. The Phase I dike, fill, and the wharf would be abandoned.

Alternative 7 would convert the existing site into a "Regional Center" composed of retail, office park, and light industrial uses. A public dock would be constructed to support small private watercrafts, onsite retail and restaurant uses. Berth construction would continue to occur but would be developed only to support small watercrafts.

CEQA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 7 would not be significant because worker travel would not occur during peak hours and because peak-hour construction trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

NEPA Impact Determination

As with the proposed Project, impacts to the transportation system from construction-related traffic of Alternative 7 would not be significant because worker travel would not occur during peak hours and because peak-hour construction trips would be minimal.

Mitigation Measures

No mitigation required.

Residual Impacts

Less than significant impact.

Impact TRANS-2: Long-term vehicular traffic associated with Alternative 7 would significantly impact twelve study intersection volume/capacity ratios, or level of service.

CEQA Impact Determination

Future Alternative 7 traffic conditions for the years 2005, 2015, 2030, and 2045 were estimated based on the retail, office, and light industrial buildings that would be constructed and operated within Berths 97-109. Table 3.6-74 summarizes the land use assumptions, and Table 3.6-75 summarizes the trip generation under Alternative 7. Traffic generated by Alternative 7 was estimated to determine potential impacts of Alternative 7 on study area roadways. Trip generation estimates for this alternative are based on trip generation rates from the Institute of Transportation Engineers (ITE) "Trip Generation" handbook (7th edition) which is the nationally recognized standard for trip generation estimation for retail, office, and industrial land uses.

Appendix F contains all of the CEQA baseline, NEPA baseline, and future with Alternative 7 traffic forecasts and level of service calculation worksheets.

Table 3.6-74. Trip-Generation Analysis Assumptions and Input Data for Alternative 7 (Nonshipping Use)

Berths 97-109	a.m. Peak Hour			p.m. Peak Hour		
	2005	2015	2030	2005	2015	2030
Land Use Assumptions						
Retail Building Size (ft^2)	176,418	277,564	277,564	176,418	277,564	277,564
Office Building Size (ft^2)	176,418	277,564	277,564	176,418	277,564	277,564
Light Industrial Building Size (ft^2)	823,284	1,295,300	1,295,300	823,284	1,295,300	1,295,300
Trip Generation Estimates						
Autos/Trucks	1,213	1,908	1,908	1,566	2,464	2,464
Transit Trips	59	93	93	77	121	121

Table 3.6-75. Trip Generation Analysis – Alternative 7

	a.m. Peak				p.m. Peak			
	2005	2015	2030	2045	2005	2015	2030	2045
CEQA Baseline (Year 2000 – China Shipping)								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
NEPA – No Federal Action at China Shipping								
Autos	5	5	5	5	7	7	7	7
Trucks	9	9	9	9	13	13	13	13
Total	14	14	14	14	20	20	20	20
Proposed Project (China Shipping)								
Autos	48	138	126	126	65	188	171	171
Trucks	87	249	286	286	124	355	309	309
Total	135	387	412	412	189	543	480	480
Alternative 7								
Autos	1,213	1,908	1,908	1,908	1,566	2,463	2,463	2,463
Trucks	0	0	0	0	0	0	0	0
Total	1,213	1,908	1,908	1,908	1,566	2,463	2,463	2,463

Tables 3.6-76, 3.6-77, 3.6-78, and 3.6-79 summarize the CEQA baseline and future with Alternative 7 intersection operating conditions at each study intersection for the 2005, 2015, 2030, and 2045 scenarios, respectively. This alternative, due to the proposed types of land uses, generates relatively more trips during the traditional commute a.m. and p.m. peak hours and less traffic during the mid-day period. This is because many of the trips are a result of employee commute trips as well as visitor trips, which concentrate in the peak hours and not during the mid-day. The CEQA baseline and Alternative 7 intersection operating conditions for each year were compared to determine the impact of Alternative 7, and then the impacts were assessed using the City of Los Angeles criteria for significant impacts.

Table 3.6-76. 2005 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2005 Baseline				Year 2005 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.521	C	0.707	0.025	0.148	p.m.
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.584	D	0.866	0.171	0.373	p.m.
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.651	B	0.642	0.020	0.016	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.679	0.000	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	B	10.1	C	22.6	0.4	10.7	p.m.
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.892	F	1.199	0.010	0.064	p.m.
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	B	0.651	C	0.710	0.103	0.179	p.m.
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	E	38.6	F	67.3	7.3	7.8	p.m.
Pacific Avenue and Front Street	A	0.505	A	0.445	B	0.607	A	0.552	0.102	0.107	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.488	B	0.638	0.127	0.176	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.387	A	0.492	0.127	0.142	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.317	A	0.556	0.001	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.414	0.001	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	B	0.612	B	0.660	0.076	0.035	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.399	A	0.554	0.093	0.094	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.530	B	0.602	0.002	0.014	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-77. 2015 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2015 Baseline				Year 2015 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	C	0.776	F	1.142	0.291	0.573	a.m., p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.799	C	0.787	0.032	0.027	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.828	0.001	0.007	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.344	A	0.525	0.015	0.092	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	C	0.746	D	0.893	0.058	0.025	a.m., p.m.
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	C	0.797	F	1.083	0.202	0.472	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	B	0.690	A	0.559	0.212	0.078	No
Pacific Avenue and Front Street	A	0.538	A	0.472	B	0.621	A	0.542	0.083	0.070	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	F	1.011	F	1.054	0.202	0.266	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.474	B	0.689	0.114	0.267	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.318	A	0.564	0.002	0.013	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.421	0.002	0.013	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.592	C	0.785	0.002	0.094	p.m.
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.498	F	1.010	0.148	0.484	p.m.
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.690	C	0.769	0.003	0.021	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-78. 2030 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2030 Baseline				Year 2030 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	D	0.869	F	1.183	0.299	0.580	a.m., p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.973	E	0.954	0.010	0.027	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.040	0.001	0.006	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.403	B	0.639	0.015	0.092	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.865	F	1.135	0.058	0.022	a.m., p.m.
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.772	F	1.109	0.101	0.475	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	C	0.737	B	0.609	0.212	0.078	a.m.
Pacific Avenue and Front Street	A	0.593	A	0.521	B	0.677	A	0.583	0.084	0.062	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	F	1.105	F	1.109	0.201	0.272	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.517	C	0.733	0.111	0.273	p.m.
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.324	A	0.559	0.003	0.012	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.365	A	0.417	0.002	0.013	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.607	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.656	D	0.850	0.002	0.085	p.m.
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.524	F	1.076	0.148	0.491	p.m.
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.913	E	0.991	0.003	0.021	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-79. 2045 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2045 Baseline				Year 2045 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	E	0.922	F	1.236	0.308	0.460	a.m., p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.101	F	1.080	0.010	0.027	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.157	0.001	0.007	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.469	C	0.734	0.015	0.093	p.m.
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.975	F	1.285	0.058	0.022	a.m., p.m.
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.840	F	1.186	0.067	0.473	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	D	0.828	B	0.692	0.233	0.086	a.m.
Pacific Avenue and Front Street	B	0.652	A	0.572	C	0.735	B	0.627	0.083	0.055	a.m.
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.413	F	1.180	0.440	0.235	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.542	C	0.777	0.102	0.202	p.m.
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.362	B	0.614	0.002	0.013	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.400	A	0.457	0.002	0.013	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.666	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.751	E	0.946	0.002	0.077	p.m.
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	B	0.604	F	1.135	0.200	0.497	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.010	F	1.089	0.003	0.021	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

The following significant intersection impacts under CEQA are forecasted for Alternative 7:

+ 2005 – Figueroa Street and Harry Bridges Boulevard – (p.m. peak hour)
Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
Harbor Boulevard and SR-47 WB on-ramp – (p.m. peak hour)
Harbor Boulevard and Swinford Street – (p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Figueroa Street and C Street/I-110 ramps – (p.m. peak hour)

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Harbor Boulevard and Swinford Street – (a.m. and p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
John S. Gibson Boulevard and Channel Street – (p.m. peak hour)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
Harbor Boulevard and Swinford Street – (a.m. and p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hour)
Figueroa Street and C Street/I-110 ramps – (a.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Neptune Avenue and Harry Bridges Boulevard – (p.m. peak hour)
John S. Gibson Boulevard and Channel Street – (p.m. peak hour)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
Navy Way and Seaside Avenue – (p.m. peak hour)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hour)
Harbor Boulevard and SR-47 WB on-ramp – (p.m. peak hour)
Harbor Boulevard and Swinford Street – (a.m. and p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hour)
Figueroa Street and C Street/I-110 ramps – (a.m. peak hour)
Pacific Avenue and Front Street – (a.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Neptune Avenue and Harry Bridges Boulevard – (p.m. peak hour)
John S. Gibson Boulevard and Channel Street – (p.m. peak hour)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
Navy Way and Seaside Avenue – (p.m. peak hour)

Therefore, Alternative 7 would result in a significant traffic impact under CEQA.

Mitigation Measures

Intersection **MM TRANS-4, MM TRANS-5,** and **MM TRANS-6** would be required to mitigate the significant impact of Project-related traffic. In addition, the intersection mitigation measures below would mitigate impacts of the Alternative 7 traffic.

TRANS-7: ***Avalon Boulevard and Harry Bridges Boulevard*** **– Add dual eastbound left-turn lanes and provide an additional eastbound through-lane on Harry Bridges Boulevard. Provide an additional westbound through-lane on Harry Bridges Boulevard. This measure shall be implemented by 2015.**

TRANS-8: ***Harbor Boulevard and SR-47 WB On-Ramp*** **– Provide an additional southbound through-lane on Harbor Boulevard. This measure shall be implemented by 2030.**

TRANS-9: ***Harbor Boulevard and Swinford Street*** **– Provide an additional northbound through-lane on Harbor Boulevard. This measure shall be implemented by 2015.**

TRANS-10: ***John S. Gibson Boulevard and I-110 NB Ramps*** **– Add dual westbound left-turn lanes and provide overlap phasing for westbound right-turn lane. Provide additional southbound through-lane on John S. Gibson Boulevard. Provide additional eastbound through-lane on I-110 NB ramp. Provide free right-turn phasing for northbound right-turn lane. This measure shall be implemented by 2045.**

TRANS-11: ***Figueroa Street and C Street/I-110 Ramps*** **– Provide an additional eastbound through-lane on I-110 ramps. Provide triple westbound left-turn lanes on C Street. This measure shall be implemented by 2045.**

TRANS-12: ***Pacific Avenue and Front Street*** **– Add dual northbound left-turn lanes on Pacific Avenue. This measure shall be implemented by 2045.**

TRANS-13: ***Neptune Avenue and Harry Bridges Boulevard*** **– Provide an additional eastbound through-lane on Harry Bridges Boulevard. This measure shall be implemented by 2030.**

TRANS-14: ***John S. Gibson Boulevard and Channel Street*** **– Add dual northbound left-turn lanes on John S. Gibson Boulevard. This measure shall be implemented by 2015.**

Tables 3.6-80, 3.6-81, 3.6-82, and 3.6-83 present the level-of-service results with implementation of the mitigation measures for 2005, 2015, 2030, and 2045, respectively.

Table 3.6-80. 2005 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2005 Future Baseline				Year 2005 With Alternative 7				Year 2005 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.521	C	0.707	A	0.523	C	0.701
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.584	D	0.866	A	0.584	B	0.632
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.651	B	0.642	—	—	—	—
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.679	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	9.7	B	11.9	B	10.1	C	22.6	A	0.292	B	0.408
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.892	F	1.199	A	0.496	B	0.695
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	B	0.651	C	0.710	B	0.614	A	0.537
Figueroa Street/C Street/I-110 Ramps [b]	D	31.3	F	59.5	E	38.6	F	67.3	A	0.559	C	0.659
Pacific Avenue and Front Street	A	0.505	A	0.445	B	0.607	A	0.552	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.488	B	0.638	—	—	—	—
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.387	A	0.492	—	—	—	—
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.317	A	0.556	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.414	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	—	—	—	—
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	B	0.612	B	0.660	—	—	—	—
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.399	A	0.554	—	—	—	—
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.530	B	0.602	—	—	—	—

Note: Unless indicated by an [a] or [b], all intersections are signalized.

[a] Unsignalized intersection

[b] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-81. 2015 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2015 Future Baseline				Year 2015 With Alternative 7				Year 2015 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	C	0.776	F	1.142	A	0.573	B	0.659
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.799	C	0.787	—	—	—	—
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.828	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.344	A	0.525	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	C	0.746	D	0.893	B	0.612	D	0.893
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	C	0.797	F	1.083	B	0.674	D	0.877
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	B	0.690	A	0.559	—	—	—	—
Pacific Avenue and Front Street	A	0.538	A	0.472	B	0.621	A	0.542	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	F	1.011	F	1.054	E	0.913	E	0.982
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.474	B	0.689	—	—	—	—
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.318	A	0.564	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.421	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	—	—	—	—
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.592	C	0.785	A	0.509	B	0.566
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.498	F	1.010	A	0.498	A	0.706
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.690	C	0.769	—	—	—	—

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA). Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-82. 2030 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2030 Future Baseline				Year 2030 With Alternative 7				Year 2030 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	D	0.869	F	1.183	A	0.597	B	0.684
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.973	E	0.954	C	0.799	D	0.851
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.040	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.403	B	0.639	—	—	—	—
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.865	F	1.135	C	0.713	F	1.090
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.772	F	1.109	B	0.678	E	0.924
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	C	0.737	B	0.609	A	0.527	A	0.498
Pacific Avenue and Front Street	A	0.593	A	0.521	B	0.677	A	0.583	—	—	—	—
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	F	1.105	F	1.109	E	0.988	F	1.020
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.517	C	0.733	A	0.517	A	0.537
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.324	A	0.559	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.365	A	0.417	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.607	—	—	—	—
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.656	D	0.850	A	0.552	B	0.698
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.524	F	1.076	A	0.524	A	0.593
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.913	E	0.991	C	0.731	E	0.909

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-83. 2045 Intersection Level of Service Analysis – Alternative 7 vs. Future Baseline

Study Intersection	Year 2045 Future Baseline				Year 2045 With Alternative 7				Year 2045 with Mitigation			
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour	
	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
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	—	—
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	E	0.922	F	1.236	B	0.635	C	0.719
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.101	F	1.080	E	0.911	E	0.948
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.157	—	—	—	—
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.469	C	0.734	A	0.430	B	0.656
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.975	F	1.285	D	0.834	F	1.257
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.840	F	1.186	C	0.761	E	0.980
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	D	0.828	B	0.692	A	0.591	A	0.545
Pacific Avenue and Front Street	B	0.652	A	0.572	C	0.735	B	0.627	A	0.488	A	0.432
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.413	F	1.180	F	1.286	F	1.081
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.542	C	0.777	A	0.542	A	0.577
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.362	B	0.614	—	—	—	—
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.400	A	0.457	—	—	—	—
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.666	—	—	—	—
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.751	E	0.946	B	0.636	C	0.796
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	B	0.604	F	1.135	B	0.604	B	0.628
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.010	F	1.089	D	0.801	E	0.998

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/ Figueroa Street/I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Residual Impact

The following intersections are forecasted to have unavoidable adverse impacts under CEQA for Alternative 7 after the implementation of the proposed mitigation measures stated above:

+ 2005 – Figueroa Street and Harry Bridges Boulevard – (p.m. peak hour)

+ 2015 – Harbor Boulevard and Swinford Street – (p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2030 – John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2045 – John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

Impacts would be less than significant under CEQA for all other intersections after implementation of the above mitigation measure.

NEPA Impact Determination

Alternative 7, when compared with the NEPA baseline, would result in significant impacts based on the City of Los Angeles impact criteria. The level of impact would be similar in magnitude compared to the CEQA baseline. Twelve intersections would have a significant impact based on comparison to the NEPA baseline, as follows:

+ 2005 – Figueroa Street and Harry Bridges Boulevard – (p.m. peak hour)
Avalon Boulevard and Harry Bridges Boulevard – (p.m. peak hour)
Harbor Boulevard and SR-47 WB on-ramp – (p.m. peak hour)
Harbor Boulevard and Swinford Street – (p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Figueroa Street and C Street/I-110 ramps – (p.m. peak hour)

+ 2015 – Avalon Boulevard and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Harbor Boulevard and Swinford Street – (a.m. and p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
John S. Gibson Boulevard and Channel Street – (p.m. peak hour)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)

+ 2030 – Avalon Boulevard and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hours)
Harbor Boulevard and Swinford Street – (a.m. and p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hour)
Figueroa Street and C Street/I-110 ramps – (a.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Neptune Avenue and Harry Bridges Boulevard – (p.m. peak hour)
John S. Gibson Boulevard and Channel Street – (p.m. peak hour)

Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
Navy Way and Seaside Avenue – (p.m. peak hour)

+ 2045 – Avalon Boulevard and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Alameda Street and Anaheim Street – (a.m. and p.m. peak hour)
Harbor Boulevard and SR-47 WB on-ramp – (p.m. peak hour)
Harbor Boulevard and Swinford Street – (a.m. and p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (a.m. and p.m. peak hour)
Figueroa Street and C Street/I-110 ramps – (a.m. peak hour)
Pacific Avenue and Front Street – (a.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)
Neptune Avenue and Harry Bridges Boulevard – (p.m. peak hour)
John S. Gibson Boulevard and Channel Street – (p.m. peak hour)
Broad Avenue and Harry Bridges Boulevard – (p.m. peak hour)
Navy Way and Seaside Avenue – (p.m. peak hour)

Therefore, Alternative 7 would result in a significant traffic impact under NEPA.

Mitigation Measures

Intersection **MM TRANS-4, MM TRANS-5, MM TRANS-6, MM TRANS-7, MM TRANS-8, MM TRANS-9, MM TRANS-10, MM TRANS-11, MM TRANS-12, MM TRANS-13,** and **MM TRANS-14** would be implemented to mitigate the significant impact of Project-related traffic.

Residual Impacts

As indicated in Tables 3.6-84 (for 2005), 3.6-85 (for 2015), 3.6-86 (for 2030), and 3.6-87 (for 2045), four intersections would be adversely affected compared to the NEPA baseline. The following intersections are forecasted to have unavoidable adverse impacts under NEPA for Alternative 7 after the implementation of the proposed mitigation measures stated above:

+ 2005 – Figueroa Street and Harry Bridges Boulevard – (p.m. peak hour)

+ 2015 – Harbor Boulevard and Swinford Street – (p.m. peak hour)
John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2030 – John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

+ 2045 – John S. Gibson Boulevard and I-110 NB ramps – (p.m. peak hour)
Fries Avenue and Harry Bridges Boulevard – (a.m. and p.m. peak hours)

Impacts would be less than significant under NEPA for all other intersections after implementation of the above mitigation measures.

Table 3.6-84. 2005 Intersection Level of Service Analysis – Alternative 7 vs. NEPA Baseline

Study Intersection	2005 NEPA Baseline				Year 2005 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard	A	0.496	A	0.559	A	0.521	C	0.707	0.025	0.148	p.m.
Avalon Boulevard and Harry Bridges Boulevard	A	0.413	A	0.493	A	0.584	D	0.866	0.171	0.373	p.m.
Alameda Street and Anaheim Street	B	0.631	B	0.626	B	0.651	B	0.642	0.020	0.016	No
Henry Ford Avenue and Anaheim Street	A	0.479	B	0.675	A	0.479	B	0.679	0.000	0.004	No
Harbor Boulevard and SR-47 WB On-Ramp [(a)]	A	9.7	B	11.9	B	10.1	C	22.6	0.4	10.7	p.m.
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.882	F	1.135	D	0.892	F	1.199	0.010	0.064	p.m.
John S. Gibson Boulevard/I-110 NB Ramps	A	0.548	A	0.531	B	0.651	C	0.710	0.103	0.179	p.m.
Figueroa Street/C Street/I-110 Ramps [(b)]	D	31.3	F	59.5	E	38.6	F	67.3	7.3	7.8	p.m.
Pacific Avenue and Front Street	A	0.505	A	0.445	B	0.607	A	0.552	0.102	0.107	No
Fries Avenue and Harry Bridges Boulevard	A	0.361	A	0.462	A	0.488	B	0.638	0.127	0.176	No
Neptune Avenue and Harry Bridges Boulevard	A	0.260	A	0.350	A	0.387	A	0.492	0.127	0.142	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.548	A	0.317	A	0.556	0.001	0.008	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.357	A	0.406	A	0.358	A	0.414	0.001	0.008	No
Santa Fe Avenue and Anaheim Street	A	0.362	A	0.508	A	0.362	A	0.509	0.000	0.001	No
John S. Gibson Boulevard/Channel Street	A	0.536	B	0.625	B	0.612	B	0.660	0.076	0.035	No
Broad Avenue/Harry Bridges Boulevard	A	0.306	A	0.460	A	0.399	A	0.554	0.093	0.094	No
Navy Way/Seaside Avenue	A	0.528	A	0.588	A	0.530	B	0.602	0.002	0.014	No

Note: Unless indicated by an [(a)] or [(b)], all intersections are signalized.

[(a)] Unsignalized intersection

[(b)] All-way stop-controlled intersection

*City of Los Angeles intersections were analyzed using Critical Movement Analysis (CMA) methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-85. 2015 Intersection Level of Service Analysis – Alternative 7 vs. NEPA Baseline

Study Intersection	2015 NEPA Baseline				Year 2015 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.485	A	0.569	C	0.776	F	1.142	0.291	0.573	a.m., p.m.
Alameda Street and Anaheim Street	C	0.767	C	0.760	C	0.799	C	0.787	0.032	0.027	No
Henry Ford Avenue and Anaheim Street	A	0.582	D	0.821	A	0.583	D	0.828	0.001	0.007	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.329	A	0.433	A	0.344	A	0.525	0.015	0.092	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	B	0.688	D	0.868	C	0.746	D	0.893	0.058	0.025	a.m., p.m.
John S. Gibson Boulevard/I-110 NB Ramps	A	0.595	B	0.611	C	0.797	F	1.083	0.202	0.472	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.478	A	0.481	B	0.690	A	0.559	0.212	0.078	No
Pacific Avenue and Front Street	A	0.538	A	0.472	B	0.621	A	0.542	0.083	0.070	No
Fries Avenue and Harry Bridges Boulevard	D	0.809	C	0.788	F	1.011	F	1.054	0.202	0.266	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.360	A	0.422	A	0.474	B	0.689	0.114	0.267	No
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.316	A	0.551	A	0.318	A	0.564	0.002	0.013	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.358	A	0.408	A	0.360	A	0.421	0.002	0.013	No
Santa Fe Avenue and Anaheim Street	A	0.390	A	0.548	A	0.391	A	0.550	0.001	0.002	No
John S. Gibson Boulevard/Channel Street	A	0.590	B	0.691	A	0.592	C	0.785	0.002	0.094	p.m.
Broad Avenue/Harry Bridges Boulevard	A	0.350	A	0.526	A	0.498	F	1.010	0.148	0.484	p.m.
Navy Way/Seaside Avenue	B	0.687	C	0.748	B	0.690	C	0.769	0.003	0.021	No

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

Table 3.6-86. 2030 Intersection Level of Service Analysis – Alternative 7 vs. NEPA Baseline

Study Intersection	2030 NEPA Baseline				Year 2030 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	A	0.570	B	0.603	D	0.869	F	1.183	0.299	0.580	a.m., p.m.
Alameda Street and Anaheim Street	E	0.963	E	0.927	E	0.973	E	0.954	0.010	0.027	a.m., p.m.
Henry Ford Avenue and Anaheim Street	C	0.740	F	1.034	C	0.741	F	1.040	0.001	0.006	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.388	A	0.547	A	0.403	B	0.639	0.015	0.092	No
Harbor Boulevard and Swinford Street/ SR-47 Ramps	D	0.807	F	1.113	D	0.865	F	1.135	0.058	0.022	a.m., p.m.
John S. Gibson Boulevard/I-110 NB Ramps	B	0.671	B	0.634	C	0.772	F	1.109	0.101	0.475	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.525	A	0.531	C	0.737	B	0.609	0.212	0.078	a.m.
Pacific Avenue and Front Street	A	0.593	A	0.521	B	0.677	A	0.583	0.084	0.062	No
Fries Avenue and Harry Bridges Boulevard	E	0.904	D	0.837	F	1.105	F	1.109	0.201	0.272	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.406	A	0.460	A	0.517	C	0.733	0.111	0.273	p.m.
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.321	A	0.547	A	0.324	A	0.559	0.003	0.012	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.363	A	0.404	A	0.365	A	0.417	0.002	0.013	No
Santa Fe Avenue and Anaheim Street	A	0.435	B	0.606	A	0.436	B	0.607	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	B	0.654	C	0.765	B	0.656	D	0.850	0.002	0.085	p.m.
Broad Avenue/Harry Bridges Boulevard	A	0.376	A	0.585	A	0.524	F	1.076	0.148	0.491	p.m.
Navy Way/Seaside Avenue	E	0.910	E	0.970	E	0.913	E	0.991	0.003	0.021	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Table 3.6-87. 2045 Intersection Level of Service Analysis – Alternative 7 vs. NEPA Baseline

Study Intersection	2045 NEPA Baseline				Year 2045 With Alternative 7				Change in V/C		Significantly Impacted
	a.m. Peak Hour		p.m. Peak Hour		a.m. Peak Hour		p.m. Peak Hour				
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	a.m.	p.m.	
Figueroa Street/Harry Bridges Boulevard [b]	—	—	—	—	—	—	—	—	—	—	No
Avalon Boulevard and Harry Bridges Boulevard	B	0.614	C	0.776	E	0.922	F	1.236	0.308	0.460	a.m., p.m.
Alameda Street and Anaheim Street	F	1.091	F	1.053	F	1.101	F	1.080	0.010	0.027	a.m., p.m.
Henry Ford Avenue and Anaheim Street	D	0.812	F	1.150	D	0.813	F	1.157	0.001	0.007	No
Harbor Boulevard and SR-47 WB On-Ramp [a]	A	0.454	B	0.641	A	0.469	C	0.734	0.015	0.093	p.m.
Harbor Boulevard and Swinford Street/ SR-47 Ramps	E	0.917	F	1.263	E	0.975	F	1.285	0.058	0.022	a.m., p.m.
John S. Gibson Boulevard/I-110 NB Ramps	C	0.773	C	0.713	D	0.840	F	1.186	0.067	0.473	a.m., p.m.
Figueroa Street/C Street/I-110 Ramps [b]	A	0.595	B	0.606	D	0.828	B	0.692	0.233	0.086	a.m.
Pacific Avenue and Front Street	B	0.652	A	0.572	C	0.735	B	0.627	0.083	0.055	a.m.
Fries Avenue and Harry Bridges Boulevard	E	0.973	E	0.945	F	1.413	F	1.180	0.440	0.235	a.m., p.m.
Neptune Avenue and Harry Bridges Boulevard	A	0.440	A	0.575	A	0.542	C	0.777	0.102	0.202	p.m.
ICTF Driveway No. 1/Sepulveda Boulevard	A	0.360	B	0.601	A	0.362	B	0.614	0.002	0.013	No
ICTF Driveway No. 2/Sepulveda Boulevard	A	0.398	A	0.444	A	0.400	A	0.457	0.002	0.013	No
Santa Fe Avenue and Anaheim Street	A	0.477	B	0.665	A	0.478	B	0.666	0.001	0.001	No
John S. Gibson Boulevard/Channel Street	C	0.749	D	0.869	C	0.751	E	0.946	0.002	0.077	p.m.
Broad Avenue/Harry Bridges Boulevard	A	0.404	B	0.638	B	0.604	F	1.135	0.200	0.497	p.m.
Navy Way/Seaside Avenue	F	1.007	F	1.068	F	1.010	F	1.089	0.003	0.021	p.m.

Note:

[a] Signalized intersection in the future due to Harbor Boulevard Interchange Improvement

[b] Signalized intersection in the future due to C Street Interchange Improvement, future analyses assume new intersection of John S. Gibson/Harry Bridges Boulevard/Figueroa Street/ I-110 ramps per current design plans

*City of Los Angeles intersections were analyzed using CMA methodology. Unsignalized intersections were analyzed using the Highway Capacity Manual methodology, which is based on estimated vehicle delay.

1

Impact TRANS-3: An increase in onsite employees due to Alternative 7 operations would result in a significant increase in related public transit use.

CEQA Impact Determination

According to the transit trip generation calculation from the 2004 Congestion Management Program for Los Angeles (CMP, 2004), Alternative 7 would result in 59 and 77 additional transit trips in 2005 for the a.m. and p.m. peak hours, respectively, and 93 and 121 additional transit trips in 2015, 2039, and 2045 for the a.m. and p.m. peak hours, respectively. The existing Los Angeles MTA Express Bus 447 travels along Harbor Boulevard, which provides access to the project site at 30-minute headway intervals during the peak hour periods. The analysis shows that the additional transit trips generated by Alternative 7 would be greater than the existing transit capacity; hence, there would be a significant transit impact.

Mitigation Measures

No mitigation is available.

Residual Impacts

Significant impacts would remain.

NEPA Impact Determination

According to the transit trip generation calculation from the 2004 Congestion Management Program for Los Angeles (CMP, 2004), Alternative 7 would result in 59 and 77 additional transit trips in 2005 for the a.m. and p.m. peak hours, respectively, and 93 and 121 additional transit trips in 2015, 2039, and 2045 for the a.m. and p.m. peak hours, respectively. The existing Los Angeles MTA Express Bus 447 travels along Harbor Boulevard, which provides access to the project site at 30-minute headway intervals during the peak hour periods. The analysis shows that the additional transit trips generated by Alternative 7 would be greater than the existing transit capacity; hence, there would be a significant transit impact.

Mitigation Measures

No mitigation is available

Residual Impacts

Significant impacts would remain.

Impact TRANS-4: Alternative 7 operations would result in significant increase in freeway congestion.

CEQA Impact Determination

Traffic impacts associated with this alternative would be similar to those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 7 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly

grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 7 would result in 95 and 123 additional trips for the a.m. and p.m. peak hours, respectively, at the intersection of O Street and Alameda Street; therefore, CMP system analysis is required. The analysis results indicate that Alternative 7 would not result in more than 0.02 increase in the D/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 7 would result in 495 and 639 additional trips for the a.m. and p.m. peak hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required at this location. The analysis results indicate that this location operates at LOS F for the p.m. peak hour, with an increase in V/C ratio of 0.038 due to the project. Therefore, there would be significant impact at the intersection of I-110 and C Street according to CMP guidelines.

The results of the analysis indicate that Alternative 7 would result in 57 and 74 additional trips for the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Mitigation Measures

No feasible mitigation measure identified for the intersection of I-110 and C Street. Additional study would be required to determine the feasibility of expanding current freeway segment capacity at the location.

Residual Impacts

Significant, unavoidable impacts would occur at the location of I-110 and C Street for the p.m. peak hour. Less than significant impacts would occur for the locations of O Street and Alameda Street, and I-710 and Willow Street.

NEPA Impact Determination

Traffic impacts associated with this alternative would be similar to those identified under the proposed Project. Similar to the proposed Project, the closest CMP arterial monitoring station to the Alternative 7 is Alameda Street/PCH. This intersection was recently improved as part of the Alameda Corridor Project, and the north-south through movements are grade separated. Since most proposed Project traffic at this location is north-south oriented, the proposed Project traffic would be on the newly grade-separated portion of the intersection. O Street is the connector between PCH and Alameda Street. Thus, the analyzed intersection is O Street/Alameda Street. Alternative 7 would result in 95 and 123 additional trips for the a.m. and p.m. peak hours, respectively, at the intersection of O Street and Alameda Street; therefore, CMP system analysis is required. The analysis results indicate that Alternative 7 would not result in more than 0.02 increase in the D/C ratio at this location; therefore, there is no CMP system impact. The results of the CMP arterial analysis are shown in Appendix F.

Similar to the proposed Project, the closest freeway monitoring stations are located at I-110 at C Street and I-710 at Willow Street. The results of the analysis indicate that Alternative 7 would result in 495 and 639 additional trips for the a.m. and p.m. peak

hours, respectively, at I-110 and C Street; therefore, CMP system analysis is required at this location. The analysis results indicate that this location operates at LOS F for the p.m. peak hour, with an increase in V/C ratio of 0.038 due to the Project. Therefore, there would be significant impact at the intersection of I-110 and C Street according to CMP guidelines.

The results of the analysis indicate that Alternative 7 would result in 57 and 74 additional trips for the a.m. and p.m. peak hours, respectively, at I-710 and Willow Street; therefore, CMP system analysis is not required at this location. The results of the CMP freeway analysis are shown in Appendix F.

Mitigation Measures

No feasible mitigation measure could be identified for the intersection of I-110 and C Street. Additional study would be required to determine the feasibility of expanding current freeway segment capacity at the location.

Residual Impacts

Significant, unavoidable impacts would occur at the location of I-110 and C Street for the p.m. peak hour. Less than significant impacts would occur for the locations of O Street and Alameda Street, and I-710 and Willow Street.

Impact TRANS-5: Alternative 7 operations would not cause any increase in rail activity.

CEQA Impact Determination

Alternative 7 is not expected to generate any additional peak-hour train movements compared to the CEQA baseline or the proposed Project because Alternative 7 would not incorporate container-shipping uses. Consequently, no significant rail delay would occur under Alternative 7.

Mitigation Measures

No mitigation required.

Residual Impacts

No Impact.

NEPA Impact Determination

Alternative 7 is not expected to generate any additional peak-hour train movements compared to the NEPA baseline or the proposed Project because Alternative 7 would not incorporate container-shipping uses. Consequently, no significant rail delay would occur under Alternative 7.

Mitigation Measures

No mitigation required.

Residual Impacts

No Impact.

3.6.3.3.3 Summary of Impact Determinations

Table 3.6-88 summarizes the CEQA and NEPA impact determinations of the proposed Project and its alternatives related to Transportation and Circulation, as described in the detailed discussion in Sections 3.6.3.3.1 and 3.6.3.3.2. This table is meant to allow easy comparison between the potential impacts of the proposed Project and its alternatives with respect to this resource. Identified potential impacts may be based on federal, state, or City of Los Angeles significance criteria, Port criteria, and the scientific judgment of the report preparers.

For each type of potential impact, 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. Note that impact descriptions for each of the alternatives are the same as for the proposed Project, unless otherwise noted.

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation				
Proposed Project	**TRANS-1:** Construction would result in a short-term, temporary increase in truck and auto traffic.	CEQA: Less than significant impact	No mitigation required	CEQA: Less than significant impact
		NEPA: Less than significant impact	No mitigation required	NEPA: Less than significant impact
	TRANS-2: Long-term vehicular traffic associated with the proposed Project would significantly impact six study intersection volume/ capacity ratios, or levels of service.	CEQA: Significant impact	**MM TRANS-1:** Avalon Boulevard and Harry Bridges Boulevard – Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard. This measure shall be implemented by 2015. **MM TRANS-2:** Alameda Street and Anaheim Street – Provide additional eastbound through-lane on Anaheim Street. This measure shall be implemented by 2015. **MM TRANS-3:** John S. Gibson Boulevard and I-110 NB ramps – Provide an additional southbound and westbound right-turn lane on John S. Gibson Boulevard and I-110 NB ramps. Reconfigure the eastbound approach to one eastbound through-left-turn lane and one eastbound through-right-turn lane. Provide an additional westbound right-turn lane with right-turn overlap phasing. This measure shall be implemented by 2015.	CEQA: Less than significant impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Proposed Project (continued)			**MM TRANS-4:** Fries Avenue and Harry Bridges Boulevard – Provide an additional westbound through-lane on Harry Bridges Boulevard. Provide an additional northbound, eastbound, and westbound right-turn lane on Fries Avenue and Harry Bridges Boulevard. This measure shall be implemented by 2015. **MM TRANS-5:** Broad Avenue and Harry Bridges Boulevard – Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard. This measure shall be implemented by 2015. **MM TRANS-6:** Navy Way and Seaside Ave – Provide an additional eastbound through-lane on Seaside Avenue. Reconfigure the westbound approach to one left-turn lane, and three through lanes This measure shall be implemented by 2030.	
		NEPA: Significant impact	**MM TRANS-1, MM TRANS-2**, **MM TRANS-3, MM TRANS-4, MM TRANS-5,** and **MM TRANS-6**	NEPA: Less than significant impact
	TRANS-3: An increase in onsite employees due to proposed Project operations would result in a less than significant increase in related public transit use.	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Proposed Project (continued)	**TRANS-4:** Proposed Project operations would result in a less than significant increase in freeway congestion.	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-5: Proposed Project operations would cause an increase in rail activity, causing potential delays in regional traffic.	CEQA: Significant impact	No feasible mitigation available	CEQA: Significant, unavoidable impact
		NEPA: Significant impact	No feasible mitigation available	NEPA: Significant, unavoidable impact
Alternative 1	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: No impact	Mitigation not required	NEPA: No impact
	TRANS-2	CEQA: No Impact	Mitigation not required	CEQA: No Impact
		NEPA: No Impact	Mitigation not required	NEPA: No Impact
	TRANS-3	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: No impact	Mitigation not required	NEPA: No impact
	TRANS-4:	CEQA: No Impact	Mitigation not required	CEQA: No Impact
		NEPA: No Impact	Mitigation not required	NEPA: No Impact
	TRANS-5	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Alternative 2	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: No impact	Mitigation not required	NEPA: No impact
	TRANS-2	CEQA: No Impact	Mitigation not required	CEQA: No Impact
		NEPA: No Impact	Mitigation not required	NEPA: No Impact
	TRANS-3	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-4:	CEQA: No Impact	Mitigation not required	CEQA: No Impact
		NEPA: No Impact	Mitigation not required	NEPA: No Impact
	TRANS-5	CEQA: No Impact	Mitigation not required	CEQA: No Impact
		NEPA: No Impact	Mitigation not required	NEPA: No Impact
Alternative 3	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-2	CEQA: Significant impact	**MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4,** and **MM TRANS-5**	CEQA: Less than significant impact
		NEPA: Significant impact	**MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4,** and **MM TRANS-5**	NEPA: Less than significant impact
	TRANS-3	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Alternative 3 (continued)	**TRANS-4:**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-5	CEQA: Significant impact	No feasible mitigation available	CEQA: Significant, unavoidable impact
		NEPA: Significant impact	No feasible mitigation available	NEPA: Significant, unavoidable impact
Alternative 4	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-2	CEQA: Significant impact	**MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5,** and **MM TRANS-6**	CEQA: Less than significant impact
		NEPA: Significant impact	**MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5,** and **MM TRANS-6**	NEPA: Less than significant impact
	TRANS-3	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-4:	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-5	CEQA: Significant impact	No feasible mitigation available	CEQA: Significant, unavoidable impact
		NEPA: Significant impact	No feasible mitigation available	NEPA: Significant, unavoidable impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Alternative 5	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-2	CEQA: Significant impact	**MM TRANS-4**	CEQA: Less than significant impact
		NEPA: Significant impact	**MM TRANS-4**	NEPA: Less than significant impact
	TRANS-3	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-4:	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-5	CEQA: Significant impact	No feasible mitigation available	CEQA: Significant, unavoidable impact
		NEPA: Significant impact	No feasible mitigation available	NEPA: Significant, unavoidable impact
Alternative 6	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Alternative 6 (continued)	**TRANS-2**	CEQA: Significant impact	**MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5,** and **MM TRANS-6**	CEQA: Less than significant impact
		NEPA: Significant impact	**MM TRANS-1, MM TRANS-2, MM TRANS-3, MM TRANS-4, MM TRANS-5,** and **MM TRANS-6**	NEPA: Less than significant impact
	TRANS-3	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-4:	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	TRANS-5	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
Alternative 7	**TRANS-1**	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Alternative 7 (continued)	**TRANS-2**	CEQA: Significant impact	**MM TRANS-4, MM TRANS-5, MM TRANS-6, MM TRANS-7, MM TRANS-8, MM TRANS-9, MM TRANS-10, MM TRANS-11, MM TRANS-12, MM TRANS-13, MM TRANS-14**	CEQA: Significant, unavoidable impact at Figueroa Street and Harry Bridges Boulevard, Harbor Boulevard and Swinford Street, John S. Gibson Boulevard and I-110 NB ramps, and Fries Avenue and Harry Bridges Boulevard. Less than significant impact after mitigation for all other intersections.
		NEPA: Significant impact	**MM TRANS-4, MM TRANS-5, MM TRANS-6, MM TRANS-7, MM TRANS-8, MM TRANS-9, MM TRANS-10, MM TRANS-11, MM TRANS-12, MM TRANS-13, MM TRANS-14**	NEPA: Significant, unavoidable impact at Figueroa Street and Harry Bridges Boulevard, Harbor Boulevard and Swinford Street, John S. Gibson Boulevard and I-110 NB ramps, and Fries Avenue and Harry Bridges Boulevard. Less than significant impact after mitigation for all other intersections.

Table 3.6-88. Summary Matrix of Potential Impacts and Mitigation Measures for Transportation and Circulation Associated with the Proposed Project and Alternatives (Continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.6 Transportation/Circulation (continued)				
Alternative 7 (continued)	**TRANS-3**	CEQA: Significant impact	No mitigation available	CEQA: Significant impact
		NEPA: Significant impact	No mitigation available	NEPA: Significant impact
	TRANS-4:	CEQA: Significant impact	No feasible mitigation available	CEQA: Significant impact
		NEPA: Significant impact	No feasible mitigation available	NEPA: Significant impact
	TRANS-5	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: No impact	Mitigation not required	NEPA: No impact
*Unless otherwise noted, all impact descriptions for each of the Alternatives are the same as those described for the proposed Project.				

3.6.3.4 Mitigation Monitoring

MM TRANS-1: Avalon Boulevard and Harry Bridges Boulevard	
Mitigation Measure	**MM TRANS-1:** Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard.
Timing	2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-2: Alameda Street and Anaheim Street	
Mitigation Measure	**MM TRANS-2:** Provide an additional eastbound through-lane on Anaheim Street.
Timing	2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-3: John S. Gibson Boulevard and I-110 NB Ramps	
Mitigation Measure	**MM TRANS-3:** Provide an additional southbound and westbound right-turn lane on John S. Gibson Boulevard and I-110 NB ramps. Reconfigure the eastbound approach to one eastbound through-left-turn lane and one eastbound through-right-turn lane. Provide an additional westbound right-turn lane with westbound right-turn overlap phasing.
Timing	2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-4: Fries Avenue and Harry Bridges Boulevard	
Mitigation Measure	**MM TRANS-4:** Provide an additional westbound through-lane on Harry Bridges Boulevard. Provide an additional northbound, eastbound, and westbound right-turn lane on Fries Avenue and Harry Bridges Boulevard.
Timing	2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-5: Broad Avenue and Harry Bridges Boulevard	
Mitigation Measure	**MM TRANS-5:** Provide an additional eastbound and westbound left-turn lane on Harry Bridges Boulevard.
Timing	2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation

MM TRANS-6: Navy Way and Seaside Avenue	
Mitigation Measure	**MM TRANS-6:** Provide an additional eastbound through-lane on Seaside Avenue.
Timing	2030
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-7: Avalon Boulevard and Harry Bridges Boulevard	
Mitigation Measure	**MM TRANS-7:** Add dual eastbound left-turn lanes and provide an additional eastbound through-lane on Harry Bridges Boulevard. Provide an additional westbound through-lane on Harry Bridges Boulevard.
Timing	Completion by 2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-8: Harbor Boulevard and SR-47 WB On-Ramp	
Mitigation Measure	**MM TRANS-8:** Provide an additional southbound through-lane on Harbor Boulevard.
Timing	Completion by 2030
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-9: Harbor Boulevard and Swinford Street	
Mitigation Measure	**MM TRANS-9:** Provide an additional northbound through-lane on Harbor Boulevard.
Timing	Completion by 2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Significant, unavoidable impact
MM TRANS-10: John S. Gibson Boulevard and I-110 NB Ramps	
Mitigation Measure	**MM TRANS-10:** Add dual westbound left-turn lanes and provide overlap phasing for westbound right-turn lane. Provide an additional southbound through-lane on John S. Gibson Boulevard. Provide an additional eastbound through-lane on I-110 NB ramp. Provide free right-turn phasing for northbound right-turn lane.
Timing	Completion by 2045
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Significant, unavoidable impact

MM TRANS-11: Figueroa Street and C Street/I-110 Ramps	
Mitigation Measure	**MM TRANS-11:** Provide an additional eastbound through-lane on I-110 ramps. Provide triple westbound left-turn lanes on C Street.
Timing	Completion by 2045
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-12: Pacific Avenue and Front Street	
Mitigation Measure	**MM TRANS-12:** Add dual northbound left-turn lanes on Pacific Avenue.
Timing	Completion by 2045
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-13: Neptune Avenue and Harry Bridges Boulevard	
Mitigation Measure	**MM TRANS-13:** Provide an additional eastbound through-lane on Harry Bridges Boulevard.
Timing	Completion by 2030
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation
MM TRANS-14: John S. Gibson Boulevard and Channel Street	
Mitigation Measure	**MM TRANS-14:** Add dual northbound left-turn lanes on John S. Gibson Boulevard.
Timing	Completion by 2015
Methodology	
Responsible Parties	Port of Los Angeles
Residual Impacts	Not Significant after Mitigation

3.6.4 Significant Unavoidable Impacts

As shown in Table 3.6-89, there would be some significant, unavoidable transportation/circulation impacts as a result of the proposed Project or its alternatives.

Table 3.6-89. Summary Matrix of Significant Unavoidable Impacts Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination After Mitigation
Proposed Project	**TRANS-5**	CEQA: Significant, unavoidable impact NEPA: Significant, unavoidable impact
Alternative 3	**TRANS-5**	CEQA: Significant, unavoidable impact NEPA: Significant, unavoidable impact
Alternative 4	**TRANS-5**	CEQA: Significant, unavoidable impact NEPA: Significant, unavoidable impact
Alternative 5	**TRANS-5**	CEQA: Significant, unavoidable impact NEPA: Significant, unavoidable impact
Alternative 7	**TRANS-2**	CEQA: Significant, unavoidable impact at Figueroa Street and Harry Bridges Boulevard, Harbor Boulevard and Swinford Street, John S. Gibson Boulevard and I-110 NB ramps, and Fries Avenue and Harry Bridges Boulevard NEPA: Significant, unavoidable impact at Figueroa Street and Harry Bridges Boulevard, Harbor Boulevard and Swinford Street, John S. Gibson Boulevard and I-110 NB ramps, and Fries Avenue and Harry Bridges Boulevard
	TRANS-3	CEQA: Significant, unavoidable impact NEPA: Significant, unavoidable impact
	TRANS-4	CEQA: Significant, unavoidable impact NEPA: Significant, unavoidable impact

1