Chapter 4
Cumulative Analysis

CHAPTER SUMMARY

This chapter evaluates the potential for the proposed Project or an alternative to make a cumulatively considerable contribution to a significant cumulative impact when the Project's impacts are combined with other past, present, and reasonably foreseeable future projects.

Chapter 4, Cumulative Analysis, provides the following:

- a description of existing environmental setting in the Port area;
- a description of applicable local, state, and federal regulations and policies that apply to the cumulative impact analysis;
- a description of the past, present and foreseeable future projects in the surrounding area;
- an impact analysis of both the cumulative impacts related to the proposed Project and alternatives; and
- a description of any mitigation measures proposed to reduce any potential impacts and residual cumulative impacts, as applicable.

Key Points of Chapter 4:

The proposed Project would expand the capacity of an existing container terminal, and its operations would be consistent with other uses and container terminals in the proposed Project area. The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact in the following resource areas under CEQA:

- Air Quality and Meteorology;
- Biological Resources;
- Cultural Resources;
- Greenhouse Gas Emissions;
- Ground Transportation; and
- Noise.

The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact in the following resource areas under NEPA:

- Air Quality and Meteorology;
- Biological Resources;

- Greenhouse Gas Emissions
- Ground Transportation; and
- Noise.

Alternative 3, 4, and 5 would make a cumulatively considerable contribution to a significant cumulative impact in the same resource areas as the proposed Project to varying degrees under CEQA and NEPA. Alternatives 1 and 2 would contribute to fewer cumulatively considerable impacts than the proposed Project under CEQA. Alternative 1 would not result in any impact under NEPA, and Alternative 2 is not applicable to NEPA.

4.1 Introduction

This chapter presents CEQA and NEPA requirements for a cumulative impact analysis and analyzes the potential for the proposed Project or an alternative to make a cumulatively considerable contribution to a significant cumulative impact when the Project's impacts are combined with other past, present, and reasonably foreseeable future projects. Following the presentation of the requirements related to the cumulative impact analyses and a description of the related projects (Sections 4.1.1 and 4.1.2, respectively), the analysis in Section 4.2 addresses each of the resource areas for which the proposed Project or alternative may make a contribution to a cumulatively significant impact when combined with other reasonably foreseeable projects in the area.

4.1.1 Requirements for Cumulative Impact Analysis

NEPA (40 CFR Section 1508.7 and 40 CFR Section 1508.25(a)(2)) and the State CEQA Guidelines (14 California Code of Regulations [CCR] 15130) require a reasonable analysis of the cumulatively considerable impacts of a proposed Project. Cumulative impacts are defined by CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines Section 15355).

Cumulative impacts are further described as follows:

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impacts from several projects are the changes in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (40 CFR Section 1508.7 and State CEQA Guidelines, Section 15355(b)).

Furthermore, according to State CEQA Guidelines Section 15130(a)(1):

> *As defined in Section 15355, a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.*

In addition, as stated in the State CEQA Guidelines, Section 15064(i)(5):

> *The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.*

NEPA also requires analysis of cumulative impacts; 40 CFR Section 1508.7 states:

> *Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other*

actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

USACE, as part of its cumulative impacts analysis, has to identify area(s) in which the effects of the proposed action will be felt; the effects that are expected in the area(s) from the proposed action; past, present, and reasonably foreseeable future actions that have or that are expected to have impacts in the same area; the impacts or expected impacts from these other actions; and the overall impact(s) that can be expected if the individual impacts are allowed to accumulate (*Fritiofson v. Alexander*, 772 F.2d 1225, 1245 [5th Cir. 1985]).

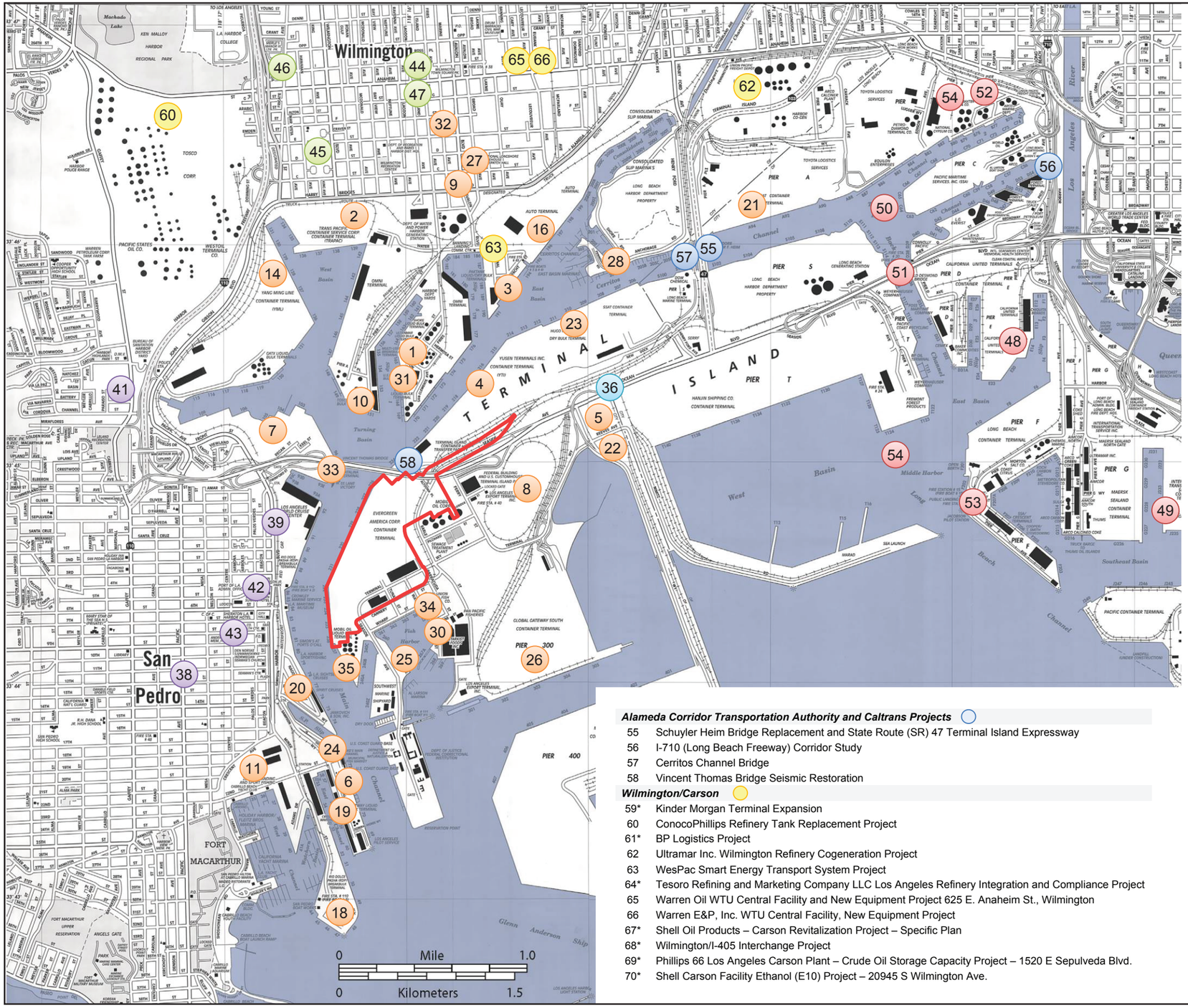
Therefore, the following cumulative impact analysis focuses on whether the impacts of the proposed Project or alternatives make a cumulatively considerable contribution to a significant cumulative impact within the context of impacts caused by other past, present, or future projects. The cumulative impact scenario considers other projects proposed within the area defined for each resource that would have the potential to contribute to cumulatively considerable impacts.

For this Draft EIS/EIR, related area projects with a potential to contribute to cumulative impacts were identified using one of two approaches: the "list" methodology or the "projection" methodology. Most of the resource areas were analyzed using a list of closely related projects that would be constructed in the cumulative geographic scope, which differs by resource and sometimes for impacts within a resource; cumulative regions of influence are documented in Section 4.2 below. The list of related projects is provided in Section 4.1.2 below.

Air Quality and Meteorology, Noise, Greenhouse Gas Emissions, and Ground Transportation analyses use a projection or a combined list and projection approach as described below. Cumulative analysis of air quality impacts uses projections from the South Coast Air Basin 2012 Air Quality Management Plan (SCAQMD, 2013) and the SCAQMD 2008 *Multiple Air Toxics Exposure Study* (MATES-III) (SCAQMD, 2008). The Ground Transportation cumulative analysis uses future traffic growth forecasts for the area from the SCAG Regional Travel Demand Forecasting Model and the Port Area Travel Demand Model, which are described in Section 3.6. The cumulative analysis of noise impacts uses a hybrid approach, as it relies on both the annual regional growth rates utilized for traffic (because traffic is an important contributor to noise impacts) and the list of related projects documented in Section 4.1.2.

4.1.2 Projects Considered in the Cumulative Analysis

A total of 70 current or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the proposed Project that could contribute to cumulative impacts. The locations of these projects are shown in Figure 4-1. A corresponding list of the cumulative projects is provided in Table 4-1 compiled from sources that include LAHD, the Port of Long Beach, LADOT, and the City of Los Angeles and other local jurisdictions. As discussed in Section 4.1.1 and further in the resource-specific sections below, analysis of some resource areas uses a projection approach encompassing a larger cumulative geographic scope and, for these resources, a



Project Site

Port of Los Angeles Projects

1 Berth 164 [Valero] Marine Oil Terminal Wharf Improvements Project
2 Berths 136-147 [TraPac] Container Terminal Project, Port of Los Angeles
3 Berths 191-194 Dry Bulk Terminal
4 Berths 212-224 (YTI) Container Terminal Improvements Project
5 Pasha Peel-Off Yard
6 Westway Decommissioning
7 Berths 97–109, China Shipping Development Project
8 LAXT Loop Container Staging Yard
9 Wilmington Waterfront Master Plan (Avalon Boulevard Corridor Project)
10 Berth 150-151 [Phillips 66 & Kinder Morgan Relocation] Marine Oil Terminal Improvements Project
11 Adaptive Reuse of Warehouses 9 and 10
12** Alternative Maritime Power (AMP™)
13* Southern California International Gateway Project (SCIG)
14 Berths 121–131 (Yang Ming) Container Terminal Improvements Project
15** Port of Los Angeles Master Plan Update
16 WWL Vehicle Services Cargo Terminal
17** Maintenance Dredging
18 Outer Harbor Cruise Terminal and Outer Harbor Park, Port of Los Angeles
19 City Dock No. 1 Marine Research Project (AltaSea), Port of Los Angeles
20 San Pedro Public Market
21 Anchorage Road Soil Storage Site (ARSSS) Open Space, Port of Los Angeles
22 Trucking Support Center, Port of Los Angeles
23 SA Recycling Crane Replacement and Electrification Project
24 Relocation of Jankovich Marine Fueling Station, Port of Los Angeles
25 Al Larson Boat Shop Improvement Project, Port of Los Angeles
26 Berths 302–306 [APL] Container Terminal Project, Port of Los Angeles
27 International Longshore and Warehouse Union Local 13 Dispatch Hall Project, Port of Los Angeles
28 Wilmington Youth Sailing and Aquatic Center, Port of Los Angeles
29** Solar Panel Installation Program, Port of Los Angeles
30 Fish Processing in Fish Harbor
31 Berths 167-169 [Shell] Marine Oil Terminal Wharf Improvements Project
32 Avalon and Fries Street Segments Closure Project
33 Avalon Freight Services Relocation Project
34 Fisherman's Pride Fish Processing Facility Project
35 Berths 238-239 [PBF Energy] Marine Oil Terminal Wharf Improvements Project

Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects

36 Navy Way/Seaside Avenue Interchange, Port of Los Angeles and Port of Long Beach

ICTF Joint Powers Authority

37* Union Pacific Railroad ICTF Modernization and Expansion Project

Community of San Pedro Projects

38 Pacific Corridors Redevelopment Project, San Pedro
39 319 N. Harbor Blvd
40* Ponte Vista/Naval Site
41 Single Family Homes 1427 N. Gaffey St, San Pedro (at Basin St)
42 Palos Verdes Urban Village 550 South Palos Verdes St, San Pedro
43 Mixed-use development, 281 W 8th Street, San Pedro

Community of Wilmington Projects

44 Distribution Center and Warehouse 755 E. L St, Wilmington (at McFarland Avenue)
45 Dana Strand Public Housing Redevelopment Project
46 931 N. Frigate
47 Wilmington Redevelopment Plan Amendment/ Expansion Project, Wilmington

Port of Long Beach Projects

48 Middle Harbor Terminal Redevelopment, Port of Long Beach
49 Piers G & J Terminal Redevelopment Project, Port of Long Beach
50 Inner Harbor Turning Basin Project
51 Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA
52 Pier B Rail Yard Expansion (On-Dock Rail Support Facility)
53 Mitsubishi Cement Corporation Facility Modifications
54 Baker Cold Storage, Inc. Cold Storage Facility

Alameda Corridor Transportation Authority and Caltrans Projects

55 Schuyler Heim Bridge Replacement and State Route (SR) 47 Terminal Island Expressway
56 I-710 (Long Beach Freeway) Corridor Study
57 Cerritos Channel Bridge
58 Vincent Thomas Bridge Seismic Restoration

Wilmington/Carson

59* Kinder Morgan Terminal Expansion
60 ConocoPhillips Refinery Tank Replacement Project
61* BP Logistics Project
62 Ultramar Inc. Wilmington Refinery Cogeneration Project
63 WesPac Smart Energy Transport System Project
64* Tesoro Refining and Marketing Company LLC Los Angeles Refinery Integration and Compliance Project
65 Warren Oil WTU Central Facility and New Equipment Project 625 E. Anaheim St., Wilmington
66 Warren E&P, Inc. WTU Central Facility, New Equipment Project
67* Shell Oil Products – Carson Revitalization Project – Specific Plan
68* Wilmington/I-405 Interchange Project
69* Phillips 66 Los Angeles Carson Plant – Crude Oil Storage Capacity Project – 1520 E Sepulveda Blvd.
70* Shell Carson Facility Ethanol (E10) Project – 20945 S Wilmington Ave.

Notes: * denotes project located beyond the extent of the map; ** denotes project has various locations within the map.
Base map source: California State Automobile Association, 2005

Figure 4-1
Related and Cumulative Projects

1

larger set of past, present, and reasonably foreseeable future projects was included for analysis of cumulative impacts. This approach uses a summary of projections in an adopted planning document, or prior document that evaluates regional or areawide conditions.

For the purposes of this Draft EIS/EIR, the Project vicinity is defined as the area over which effects of the proposed Project or an alternative could contribute to cumulative effects. The cumulative regions of influence for individual resources are documented further in each of the resource-specific subsections in Section 4.2.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
Port of Los Angeles Projects			
1	Berth 164 [Valero] Marine Oil Terminal Wharf Improvements Project	The proposed Project involves demolishing the existing 19,000-square-foot timber wharf and constructing a new, steel and concrete loading platform, access trestles, pipeline trestle, mooring structures, berthing structures, catwalks, topside equipment, and necessary utilities to comply with the Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). The project also consists of a 30-year lease for the facility.	NOP released July 21, 2016 and Public Review Period closed August 19, 2016. Draft EIS/EIR is in preparation.
2	Berths 136–147 [TraPac] Container Terminal Project, Port of Los Angeles	Element of the West Basin Transportation Improvement Projects. Expansion and redevelopment of the TraPac Container Terminal to 243 acres, including improvement of Harry Bridges Boulevard and a 30-acre landscaped area, relocation of an existing rail yard and construction of a new on-dock railyard, and reconfiguration of wharves and backlands (includes filling of the Northwest Slip, dredging, and construction of new wharves.	The Harbor Board of Commissioners (BHC) certified the EIR and approved the project on December 6, 2007. Construction started in 2009; with in-water construction completed and upland construction to be completed in 2017.
3	Berths 191-194 Dry Bulk Terminal	Construction and operation of a dry bulk terminal for vessel unloading, milling, storage and trucking of ground, granulated blast furnace slag.	Conceptual planning underway.
4	Berths 212-224 (YTI) Container Terminal Improvements Project	Deepening Berths 214-216 and 217-220 and expanding the Terminal Island Container Transfer Facility (TICTF) on-dock rail by adding a single rail loading track. Cranes will also be replaced/added for a total of 14 operational cranes at full build out. Backland improvements would also occur.	FEIR certified on November 7, 2014. Expansion approved and construction expected to be completed in early 2018.
5	Pasha Peel-Off Yard	Construction and operation of a peel-off yard (secondary cargo staging area) to provide cargo sorting and congestion relief for all container terminals in Port of LA and Port of Long Beach. Located at 801 Reeves Avenue on Terminal Island.	IS/MND under preparation.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
6	Westway Decommissioning	Decommissioning of the Westway Terminal along the Main Channel (Berths 70–71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels and remediation of the site.	Decommissioning completed 2013. Remediation is in conceptual planning phase.
7	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction, and backland development.	BHC certified the EIR and approved the project on December 8, 2009. Construction completed in 2013. NOP for Supplemental EIR (SEIR) released September 2015. SEIR under preparation for revised project.
8	Harbor Performance Enhancement Center Project,	Construction and operation of a peel-off yard (secondary cargo staging area) to provide cargo sorting and congestion relief for all container terminals in Port of LA and Port of Long Beach. Located at the LAXT loop on Terminal Island.	Environmental assessment expected to start mid-2017
9	Wilmington Waterfront Master Plan (Avalon Boulevard Corridor Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.	EIR certified and project approved on June 18, 2009. Design to be completed mid-2018.
10	Berth 150-151 [Phillips 66 & Kinder Morgan Relocation] Marine Oil Terminal Improvements Project	Demolition of the existing timber wharf and replacement with a new concrete loading platform, mooring and breasting dolphins, access ramps, catwalks, and underwater bulkhead. New topside and piping components would be included. Relocation of the Kinder Morgan petroleum loading and unloading operations from Berths 118-120 to Berth 150-151, which includes new piping, new unloading pump station and new transmix tank and pump.	Notice of Preparation anticipated in 2017. Construction TBD

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
11	Adaptive Reuse of Warehouses 9 and 10	Adaptive reuse of Warehouses 9 and 10 for visitor-serving uses to complement recreational activity at adjacent 22nd Street Park. Property leased to Crafted at the Port of Los Angeles. Also includes a brewery operation added in 2015.	Addendum to San Pedro Waterfront EIR completed. Operations began in summer of 2012.
12	Alternative Maritime Power (AMP™)	AMP™ systems (also known as "cold-ironing) at the Port include a shore side power source, a conversion process to transform the shore side power voltage to match the vessel power systems, and a container vessel that is fitted with the appropriate technology to utilize electrical power while at dock. AMP facilities are being constructed at container terminals throughout the Port to support ARB regulations and CAAP policy.	Construction completed at various terminal locations; still ongoing.
13	Southern California International Gateway Project (SCIG)	Construction and operation of a 157-acre dock railyard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	Final EIR certified May 2013. Construction on hold due to litigation.
14	Berths 121–131 (Yang Ming) Container Terminal Improvements Project	Wharf modifications at the Yang Ming Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.	NOI/NOP released in 2014. Draft EIR/EIS under preparation.
15	Port of Los Angeles Master Plan Update	Redevelopment of Fish Harbor, redevelopment of Terminal Island and consideration of on-dock rail expansion, and consolidation of San Pedro and Wilmington Waterfront districts.	BHC certified Program EIR in August 2013. Coastal Commission certification March 2014.
16	WWL Vehicle Services Cargo Terminal	Expansion of vehicle offloading processing and operations, including cargo increase up to 220,000 vehicles per year and construction of two additional rail loading tracks.	MND approved August 2012. Construction expected to be completed in 2018.
17	Maintenance Dredging	Maintenance dredging is the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches, and port facilities. This is conducted regularly for navigational purposes (at least once every five years).	Continuous, but intermittent on average every 3–5 years.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
18	Outer Harbor Cruise Terminal and Outer Harbor Park, Port of Los Angeles	Construction of two new, cruise terminals that would total up to 200,000 square feet (approximately 100,000 square feet each) and parking at Berths 45–47 and 49–50 in the Outer Harbor. The terminals would be designed to accommodate the berthing of a Freedom Class or equivalent cruise vessel (1,150 feet in length). A proposed Outer Harbor Park would encompass approximately 6 acres at the Outer Harbor. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	BHC certified the Final EIS/EIR and approved the project on September 29, 2009. Construction is on hold.
19	City Dock No. 1 Marine Research Project (AltaSea), Port of Los Angeles	This project includes development of a marine research center within a 28-acre area located between Berths 57–72. This project would change the break bulk areas east of East Channel (Berths 57–72) to institutional uses.	Addendum completed February 2017 for initial phase, including occupancy of transit sheds at Berths 58-60 and development of Launch Plaza. Construction to start in 2017. Design plans for full buildout are in progress.
20	San Pedro Public Market	This project includes redevelopment of the 30-acres, formerly known as the Ports O' Call Village, with up to 300,000 square feet of visitor-serving commercial uses and up to a 75,000 square feet conference center. This project would involve changing the industrial uses along Harbor Boulevard to commercial. This project also includes a waterfront promenade and 3 acres of open space. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	The Board certified the Final EIS/EIR and approved this project on September 29, 2009 and the Addendum in May 2016. Conceptual planning by private developer ongoing. Construction is anticipated to be completed in 2021.
21	Anchorage Road Soil Storage Site (ARSSS) Open Space, Port of Los Angeles	This project would create approximately 30 acres of passive open space at the ARSSS. The project may also include undergrounding utilities and roadway improvements at the Anchorage and Shore Road intersection.	On hold.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
22	Trucking Support Center, Port of Los Angeles	This project would utilize approximately 33 acres at the former Navy Reserve site to provide a new trucking support center and restaurant. The project would allow fueling for new clean-technology drayage vehicles.	On hold.
23	SA Recycling Crane Replacement and Electrification Project	This project, located in Terminal Island, would involve the assembly of a Tier 4 diesel/electric hybrid replacement crane, the installation of conduit and wiring to electrify the wharf and the disposal of the existing diesel crane. There are no operational alternations or expansions proposed.	BHC adopted Negative Declaration in April 2016. Crane has been in operation since 2016.
24	Relocation of Jankovich Marine Fueling Station, Port of Los Angeles	This project would relocate Jankovich to Berth 73 where it would take over operations of an existing fueling station with minor improvements including new storage tanks.	Addendum to the certified Final EIR for the San Pedro Waterfront Project is in progress. Conceptual planning ongoing.
25	Al Larson Boat Shop Improvement Project, Port of Los Angeles	Modernization of existing boat yard and 30-year lease extension.	BHC certified the Final EIR and approved the project on April 29, 2009. Currently on hold.
26	Berths 302–306 [APL] Container Terminal Project, Port of Los Angeles	Improvements and expansion of the existing terminal, including the addition of cranes, modifications to the main gate, converting an existing dry container storage unit to a refrigerated unit, and the expansion of the terminal onto 41 acres adjacent to the existing terminal. Revised project includes continued operations with minor modifications to the terminal and a 15-year lease extension through 2043.	BHC certified the Final EIR and approved the project on June 7, 2012 and approved an Addendum in October 2016. Expansion project on hold. Revised project is ongoing.
27	International Longshore and Warehouse Union Local 13 Dispatch Hall Project, Port of Los Angeles	The project will accommodate current and anticipated needs of the International Longshore and Warehouse Union by providing a meeting space and administrative offices for dispatching longshore workers to cargo terminals within the Port and Port of Long Beach.	BHC adopted the Mitigated Negative Declaration and approved the project on May 19, 2011. Construction completed 2015. Operations are on hold.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
28	Wilmington Youth Sailing and Aquatic Center, Port of Los Angeles	Construction of a facility that includes a sailing center and adjacent boat dock and launch ramp at Berth 204 in Wilmington.	Mitigated Negative Declaration (MND) approved November 15, 2012. New long-term site is being determined. Project on hold for permanent facility.
29	Solar Panel Installation Program, Port of Los Angeles	Installation of 10 MW of solar power within the Port.	Construction at some sites began 2009. Construction ongoing through at least 2017.
30	Fish Processing in Fish Harbor	Upgrades of existing facilities and construction of new facilities for fish processing operations	Conceptual planning stage.
31	Berths 167-169 [Shell] Marine Oil Terminal Wharf Improvements Project	Various wharf and seismic ground improvements that are required in order to comply with MOTEMS, as well as other elements not required by MOTEMs. Capacity of the terminal would not be increased; however, the project includes a new 30 year lease. In general, this project would demolish the existing timber wharf (with two berths) and replace it with two new loading platforms, access trestles (to the platforms), mooring dolphins and catwalks, and provide seismic ground improvements along the northwest portion of the terminal grounds.	NOP released June 2015. Draft EIR being prepared.
32	Avalon and Fries Street Segments Closure Project	Physical closure of segments of Avalon Boulevard and Fries Avenue by installing street modifications that include cul-de-sacs, curbs and gutters, and fencing and signage.	On hold.
33	Avalon Freight Services Relocation Project	Shifting existing Catalina Island freight operations from Berth 184 in Wilmington to Berth 95 in San Pedro.	BHC adopted Negative Declaration on January 22, 2015. Project complete in 2016.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
34	Fisherman's Pride Fish Processing Facility Project	Redevelop a vacant and under-utilized industrial space into a state-of-the-art commercial seafood processing facility.	BHC adopted Mitigated Negative Declaration on February 6, 2014. Project is underway.
35	Berths 238-239 [PBF Energy] Marine Oil Terminal Wharf Improvements Project	Demolition of the existing concrete wharves at Berths 238 and 239 and replacement with a new concrete loading platform, vehicular access ramp, berthing and mooring structures, catwalks, and other utilities at Berth 238 to comply with MOTEMS.	Notice of Preparation anticipated in 2017. Construction TBD
Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects			
36	Navy Way/Seaside Avenue Interchange, Port of Los Angeles and Port of Long Beach	Construction of a new flyover connector from northbound Navy Way to westbound Seaside Avenue and elimination of the traffic signal.	Conceptual planning stage.
ICTF Joint Powers Authority			
37	Union Pacific Railroad ICTF Modernization and Expansion Project	Union Pacific proposal to modernize existing intermodal yard 4 miles from the Port.	Draft EIR on hold.
Community of San Pedro Projects			
38	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction underway of four housing developments and Welcome Park.	Project underway. Estimated 2032 completion year
39	319 N. Harbor Blvd	Construction of 94 unit residential condominiums.	Construction has not started according to LADOT Planning Department.
40	Ponte Vista/Naval Site	Construct 1,135 residential units, including single family homes, apartments, and condominiums, and open space.	NOP released in October 2010. Construction began in May 2014. Homes to be built through 2016/2017.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
41	Single Family Homes 1427 N. Gaffey St, San Pedro (at Basin St)	Construction of 135 single-family homes—about 2 acres.	Project approved; construction ongoing.
42	Palos Verdes Urban Village 550 South Palos Verdes St, San Pedro	Construction of 251 condominiums and 4,000 square feet of retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started.
43	Mixed-use development, 281 W 8th Street, San Pedro	Project to construct 72 condominiums and 7,000 square feet retail. 281 West 8th Street (near Centre Street), San Pedro.	Under construction according to City of Los Angeles Zoning Information and Map Access System (ZIMAS).
Community of Wilmington Projects			
44	Distribution Center and Warehouse 755 E. L St, Wilmington (at McFarland Avenue)	Construction of a 135,000-square-foot distribution center and warehouse on a 240,000-square-foot lot with 47 parking spaces.	No construction has started; lot is vacant and bare. LADOT Planning Department has no estimated completion year.
45	Dana Strand Public Housing Redevelopment Project	413 units of mixed-income affordable housing to be constructed in four phases: Phase I: 120 rental units; Phase II: 116 rental units; Phase III: 100 senior units; Phase IV: 77 single family homes. The plans also include a day care center, lifelong learning center, parks, and landscaped open space.	Initial three phase completed by 2012, and are being leased; construction of last phase is not yet underway.
46	931 N. Frigate	Private school expansion for 72 students increase for a total of 350 students.	Construction has not started according to LADOT Planning Department.

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No. in Figure	Project Title and Location	Project Description	Project Status
47	Wilmington Redevelopment Plan Amendment/ Expansion Project, Wilmington	The existing Wilmington Industrial Park would be expanded by an additional 2,487 acres, for a total of approximately 2,719 acres. Under the probable maximum level of development, the overall project area could support up approximately 7,326 residential units (primarily multi-family; zone changes under the Plan would permit multi-use and higher density residential development). In addition to the residential development, the Project could accommodate up to approximately 207 acres (9 million square feet) of commercial development and up to 333 acres (14.5 million square feet) of industrial development.	NOP for Program EIR released for public review in August 2010. Currently on hold.
Port of Long Beach Projects			
48	Middle Harbor Terminal Redevelopment, Port of Long Beach	Consolidation of two existing container terminals into one 345-acre (138-hectare) terminal. Construction includes approximately 54.6 acres of landfill, dredging, and wharf construction; construction of an intermodal rail yard; and reconstruction of terminal buildings.	Approved project. Construction is expected to be completed by the end of 2019.
49	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal. The Piers G and J redevelopment project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements.	Approved project. Construction underway
50	Inner Harbor Turning Basin Project	Dredging of approximately 50,000 cubic yards (cy) of material to widen the Turning Basin to 1.190 feet and deepen it to -52 feet mean lower low water.	Approved project. Construction pending (2016-2017).
51	Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	FEIR/EA certified. Approved project, construction ongoing, expected to be completed late 2017 to mid-2018.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
52	Pier B Rail Yard Expansion (On-Dock Rail Support Facility)	Expansion of the existing Pier B Rail Yard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	DEIR being prepared.
53	Mitsubishi Cement Corporation Facility Modifications	Facility modification, including the addition of a catalytic control system, construction of four additional cement storage silos, and upgrading existing cement unloading equipment on Pier F.	Project approved in April 2015. Project on hold.
54	Baker Cold Storage, Inc. Cold Storage Facility	Construction of a 250,000 square-foot cold storage facility for the import/export of food products.	Approved project. Construction underway (2014-2016).
Alameda Corridor Transportation Authority and Caltrans Projects			
55	Schuyler Heim Bridge Replacement and State Route (SR) 47 Terminal Island Expressway	ACTA/Caltrans project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR-47/Henry Ford Avenue/ Alameda Street transportation corridor by constructing an elevated expressway from the Heim Bridge to SR 1 (Pacific Coast Highway [PCH]).	Project approved, construction began in 2011, fixed structure anticipated to be completed in 2017. Elevated expressway deferred indefinitely
56	I-710 (Long Beach Freeway) Corridor Study	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of the I-710, between the San Pedro Bay ports and SR 60. Early Action Projects include: a) Port Terminus: Reconfiguration of SR 1 (PCH) and Anaheim Interchange, and expansion of the open/green space at Cesar Chavez Park. b) Mid Corridor Interchange: Reconfigurations Project for Firestone Boulevard Interchange and Atlantic/Bandini Interchange.	Study completed in 2005. NOP/NOI released August 2008. DEIR/EIS circulated. Comment period ended September 28, 2013 Preliminary design and traffic forecasts for use in updated studies is being prepared. RDEIR is anticipated to be circulated Spring 2017.
57	Cerritos Channel Bridge	New rail bridge adjacent to existing Badger Avenue Rail Bridge	Project delayed; start date undetermined. Deferred indefinitely.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
58	Vincent Thomas Bridge Seismic Restoration	Construction includes replacing bridge dampers and installing buckling restrained braces.	Construction is ongoing and is anticipated to be complete in 2019.
Wilmington/Carson			
59	Kinder Morgan Terminal Expansion	The project involves the construction of 18 new, 80,000-barrel product storage tanks and one new, 30,000-barrel transmix storage tank with related piping, pumps, and control systems on the southwestern portion of the existing Carson Terminal facility.	Construction activities for the Kinder Morgan Terminal Expansion project are expected to occur over a 10-year period.
60	ConocoPhillips Refinery Tank Replacement Project	ConocoPhillips operators are in the process of removing seven existing petroleum storage tanks and replacing them with six new tanks, four at the Carson Plant, and two new tanks at the Wilmington Plant.	A Negative Declaration has been prepared for this project.
61	BP Logistics Project	The project involves the construction and operation of two 260-foot diameter covered external floating roof crude oil storage tanks. The two crude oil storage tanks have a capacity of 500,000 barrels each, and will require related piping and process control systems.	Final EIR has been prepared and certified by City of Carson. Project on hold.
62	Ultramar Inc. Wilmington Refinery Cogeneration Project	The proposed Project consists of the addition of a 35 MW Cogeneration Unit including a gas turbine, heat recovery steam generator, a selective catalytic reduction unit, an evaporative cooler, and connections to an existing aqueous ammonia tank at the Refinery	Final EIR certified October 10, 2014.
63	WesPac Smart Energy Transport System Project	WesPac is proposing to construct a jet fuel pipeline system to support airport operations at Los Angeles International Airport (LAX) and other airports in the western United States.	Revised EIR certified July 2011. Not yet constructed.
64	Tesoro Refining and Marketing Company LLC Los Angeles Refinery Integration and Compliance Project	This project will integrate the newly purchased facility in Carson with the current facility in Wilmington. Modifications to various units at the Carson and Wilmington Operations will be made to ensure compliance and increase operation efficiency. Pipelines will also be installed to improve efficiency within and between the two sites.	Draft EIR released March 2016. Comment period closed June 2016. Construction anticipated to begin late 2016 to 2021.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
65	Warren Oil WTU Central Facility and New Equipment Project 625 E. Anaheim St., Wilmington	Proposed project would make modifications to an existing oil production facility to remove and replace an existing flare, add a heater-treater, and add microturbines to generate electricity on-site.	ND release April 15, 2009. Final ND under preparation. Construction expected 3rd quarter 2010 through 2013.
66	Warren E&P, Inc. WTU Central Facility, New Equipment Project	Implement gas sales without interim gas reinjection and to modify the gas handling component of the 2011 Project to facilitate gas sales.	Final ND published August 2014.
67	Shell Oil Products – Carson Revitalization Project – Specific Plan	Shell Oil Products is proposing the redevelopment of the 448-acre Shell Carson Terminal facility located at 20945 South Wilmington Avenue. The project will allow for subsequent development over a 15 to 25 year time period. The initial phases will include development of an 8.8 acre retail center at Del Amo and Wilmington Avenue, a 12.3 acre business park on Chico Street and the addition of product storage tanks within the center of the property.	DEIR commend period ended March 26, 2014. FEIR under preparation.
68	Wilmington/I-405 Interchange Project	The proposed project includes modification of the ramps, construction of a new I-405 northbound onramp, widening of Wilmington Avenue from 223rd Street, south of I-405, to I-405 northbound onramp north of the Interchange, and construction of a right turn lane from Wilmington Avenue northbound to 223rd Street eastbound. Additionally, this project includes synchronizing all traffic signals at this location, extending from 220th Street to the north, to 223rd Street to the south.	MDD approved in January 2009. Currently, under construction and expected to be complete in early 2017.
69	Phillips 66 Los Angeles Carson Plant – Crude Oil Storage Capacity Project – 1520 E Sepulveda Blvd.	Phillips 66 is proposing to increase crude oil storage capacity at its Los Angeles Refinery Carson Plant by installing one new 615,000 barrel crude oil storage tank with a geodesic dome, increasing the annual permit throughput limit of two existing 320,000 barrel crude oil storage tanks, and installing geodesic domes on the same two existing 320,000 barrel crude oil storage tanks. Tie-ins to the Pier "T" crude oil delivery pipeline from Berth 121 would be installed.	Final ND approved December 2014. Currently under construction.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
70	Shell Carson Facility Ethanol (E10) Project – 20945 S Wilmington Ave.	Shell proposes to convert existing smaller (69,000 bbl) gasoline storage tanks to ethanol service to maximize efficiency in using its existing storage facilities. The EIR for this project included the following project objectives: 1. Increase the Carson Facility's ethanol storage capacity by approximately 75 percent; 2. Increase ethanol tanker-truck loading capacity by at least 75 percent; 3. Include modifications that would minimize impacts to its existing capacity to receive, store and deliver other petroleum products at current levels; and 4. Maintain operational efficiency, safety and flexibility.	FEIR published December 2012.

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4.2 Cumulative Impact Analysis

The following sections analyze the cumulative impacts identified for each resource area relative to the proposed Project and the list of related projects identified in Table 4-1. The discussion of impacts of past, present, and reasonably foreseeable future projects refers to the list of projects and reference numbers as shown in Table 4-1. The five alternatives listed below are also analyzed relative to the related projects under CEQA and four alternatives (Alternative1 and Alternatives 3 through 5) are analyzed relative to NEPA.

- Alternative 1 – No Federal Action
- Alternative 2 – No Project
- Alternative 3 – Reduced Project: Reduced Wharf Improvements
- Alternative 4 – Reduced Project: Reduced Backland Improvements
- Alternative 5 – Expanded On-Dock Railyard: Wharf and Backland Improvements with an Expanded Terminal Island Container Transfer Facility (TICTF).

4.2.1 Aesthetics and Visual Resources

4.2.1.1 Scope of Analysis

The geographic scope of analysis for cumulative impacts on aesthetics and visual resources to which the proposed Project may contribute is the set of viewing areas from which the proposed Project has the potential to be seen, either as part of a single view or a series of related views (i.e., a scenic route). Outside of this set of points, the proposed Project would not be within public views and therefore would not have the potential to contribute to cumulative aesthetic and visual resource impacts.

Past, present, planned, and reasonably foreseeable future development that could contribute to cumulative impacts on aesthetics and visual resources are those that have involved, or would involve, grading, paving, landscaping, construction of roads, buildings, and other working port facilities, as well as the presence and operation of equipment, such as gantry cranes, rail and trucking facilities, and backland storage sites. Views may also be affected by in-water and over-water activities such as dredging, filling, wharf demolition and construction, and container ship traffic.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.1.4.3. The criteria for Impacts AES-1, AES-2, AES-3, and AES-4 apply to the CEQA analyses while the criterion for Impact AES-5 applies to the NEPA analysis.

4.2.1.2 Cumulative Impact AES-1: The proposed Project would not contribute to a cumulatively considerable adverse effect on a scenic vista from a designated scenic resource due to obstruction of views—Less than Cumulatively Considerable

Cumulative Impact AES-1 represents the potential of the proposed Project or alternatives along with related projects to result in significant impacts on a scenic vista within the cumulative study area from a designated scenic resource. A cumulatively considerable impact on a scenic vista would occur if the development activities necessary to implement the proposed Project, in combination with one or more of the related projects, would result in significant impacts to such scenic vistas. Cumulatively considerable impacts would include substantial or total blockage of views from a designated scenic view vantage point.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Scenic views that encompass the Project site are primarily available from the higher elevations to the west in San Pedro and the Palos Verdes Peninsula. Views toward the Project site from these locations encompass the Port as well as intervening development and the ocean and horizons at higher elevations.

The visual changes that would be brought about by the proposed Project would be taking place in the distinctive landscape region created by the Port Complex, which collectively constitutes one of the largest port complexes in the world. In this area, over the course of the past century, the construction of breakwaters, the dredging of channels, filling for creation of berths and terminals, and construction of the infrastructure required to support Port operations have completely transformed the original natural setting to create a landscape that is highly engineered, nearly entirely altered, and visually dominated by large-scale man-made features. Past, present, and future projects at the Port have contributed and will continue to contribute to this heavily altered and man-made view of a working Port. Continued development associated with container terminal projects such as the Berths 136–147 [TraPac] Marine Terminal (#2 as listed in Table 4-1), Berths 212-224 [YTI] (#4), Berths 97-109 [China Shipping] (#7), Berths 121-131 [Yang Ming] (#14), and Berths 302-306 [APL] (#26), along with the proposed Project, would increase the concentration of large-scale development (due to the size and number of cranes and vessels calling at the berths) within the Port. As a result, the existing visual quality from many of the scenic points with views into the Port is low to moderately low due to the prominent visibility of intensive shipping and industrial operations. There are specific sites that provide higher quality views, either due to existence of open water, views of the horizon and Pacific Ocean, or other features of interest.

The space within the Port has already been graded and developed. Therefore, present and reasonably foreseeable future projects visible at the Port would generally be built on previously developed land within the existing Port boundaries, would be consistent with the existing operations and uses, and would not need to be integrated into the aesthetics of the site through special design techniques. As presented in Table 4-1, the cumulative related projects identified within the Port consist primarily of redevelopment or expansion projects, including container terminal and wharf improvements, construction

of new facilities, and roadway modifications. As a result, these cumulative projects would result in construction of features that would be similar to existing development and would not contrast with existing visual conditions from scenic viewpoints. Further, while the present and reasonably foreseeable future projects would increase the level of development visible from the scenic viewpoints, they would not obstruct available views of the working port and horizon beyond. Therefore, given the existing working port setting, the cumulative impacts of past, present, and reasonably foreseeable future projects combined would not result in a significant impact under CEQA.

Contribution of the Proposed Project

The proposed Project would raise some existing cranes and add new cranes; however, this action would not remove or demolish any features that substantially contribute to the scenic value of the area. As discussed in detail in Section 3.1.4.3, the Project site is within a highly industrialized area within the Port and views from the surrounding viewpoints, including scenic routes and scenic vantage points, are often fleeting, distant, and/or obstructed by intervening topography and development. Further, the raised/modified cranes, new cranes, and backlands improvements would be consistent with the existing features of the Port landscape region, and would not contrast with the surrounding viewscape. The overall effect of the proposed Project would be to increase the size of container ships that could dock at the Everport Container Terminal and add to the complex scene in the middleground zone of most views. The raised cranes would be identical to the new cranes and consistent in scale with other elements of the view, and the proposed Project would be visually compatible with the overall character of the view as a working port environment. Furthermore, the new cranes and berthed vessels would not result in blockages of views of the Vincent Thomas Bridge from sensitive viewing areas. Therefore, the proposed Project would not substantially alter or interfere with the public's visual access to existing views (would not interrupt or block the view) and, consequently, would cause no significant impact under AES-1. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to scenic vistas under CEQA. Cumulative Impact AES-1 is not a NEPA issue of concern.

Contribution of the Alternatives

For the same reasons as described above for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to scenic vistas. Cumulative Impact AES-1 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required. Cumulative Impact AES-1 is not a NEPA issue of concern.

4.2.1.3 Cumulative Impact AES-2: The proposed Project would not contribute to cumulatively considerable damage to scenic resources (including, but not limited to, trees, rock outcroppings, and historic buildings) within a state scenic highway—Less than Cumulatively Considerable

Cumulative Impact AES-2 represents the potential for the proposed Project, along with related cumulative projects, to result in significant impacts on the cumulative study area to scenic resources within a state scenic highway. This criterion is related to the CEQA Appendix G Aesthetics checklist questions "Would the Project have a substantial adverse effect on a scenic vista?" and "Would the Project substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?" and the *L.A. CEQA Thresholds Guide* factors for determining significance under the Obstruction of Views visual element (City of Los Angeles, 2006).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

There are no designated state scenic highways within the proposed Project area; however, the City of Los Angeles has City-designated scenic highways for local planning and development decisions and considerations. As discussed in Section 3.1.2.3, John S. Gibson Boulevard, Pacific Avenue, Front Street, and Harbor Boulevard are City-designated scenic highways because they afford views of the Port and the Vincent Thomas Bridge. Of these City scenic highways, only views from Harbor Boulevard, and to a limited extent Front Street allows views of the proposed Project site. These views are of a working container terminal within a working port that includes transportation infrastructure. The features of these views from the local scenic highways in the proposed Project area that are most vivid are undoubtedly the existing tall cranes, container-laden ships at container terminals, and the partial, oblique-view glimpses of the towers and suspension cables of the Vincent Thomas Bridge. The Vincent Thomas Bridge is a popular landmark in the region. Past Port projects in the vicinity of the proposed Project have had the effect of changing or degrading important views toward the Vincent Thomas Bridge. The past, present and future projects directly visible along the Main Channel (such as City Dock No. 1 [#19], San Pedro Public Market [#20], China Shipping [#7], and Berths 238-239 [PBF Energy] [#35]) would contribute to the broad array of images available from these locations. The projects would add to the visual diversity of a working port, but could also lead to some obstruction of views of the working Port and Vincent Thomas Bridge afforded from the locally designated scenic highway (i.e., the cruise terminal parking structures associated with the San Pedro Waterfront Project would block views of the Vincent Thomas Bridge). However, as discussed in Cumulative Impact AES-1, the present and reasonably foreseeable future projects would be within an urbanized area that has already been graded and developed, and would result in construction of features that would be similar to existing development. Additionally, the present and reasonably foreseeable future related projects would not obstruct available views of the working port and horizon beyond. Therefore, the cumulative impacts of past, present, and reasonably foreseeable future projects would not be significant under CEQA.

Other Locations

Other viewpoints that afford views of the proposed Project include residential areas of San Pedro, South Beacon Street, the edge of the bluff in San Pedro Plaza Park, Friendship Park, and fleeting views available to motorists traveling on the Vincent Thomas Bridge. These locations offer panoramic views of the San Pedro Waterfront, working Port, and ocean beyond (the prominence of each feature varies by location depending on elevation and distance). As discussed in Cumulative Impact AES-1, the present and reasonably foreseeable future projects visible at the Port would be within an industrial area that has already been graded and developed, and would result in construction of features that would be similar to existing development. Additionally, the past, present, and reasonably foreseeable future related projects would not obstruct available views of the working Port and horizon beyond. Therefore, the cumulative impacts of past, present, and reasonably foreseeable future projects would not result in a significant impact under CEQA.

Contribution of the Proposed Project

The proposed Project's impact on views from locally designated scenic highways is discussed in detail in Section 3.1.4.3 under Impact AES-2. As determined in the impact analysis, the proposed Project would not obstruct or detract from views available at any of the viewpoints, as the visual changes would be consistent with the overall Port setting of the proposed Project and would not substantially change the views of the proposed Project area or block scenic resources. Therefore, there would be no proposed Project-specific impact and thus the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to scenic resources under CEQA. Cumulative Impact AES-2 is not a NEPA issue of concern.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to scenic resources. Cumulative Impact AES-2 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required. Cumulative Impact AES-2 is not a NEPA issue of concern.

4.2.1.4 Cumulative Impact AES-3: The proposed Project would not contribute to a cumulatively considerable degradation of the existing visual character or quality of the site or its surroundings—No Cumulatively Considerable Impact

Cumulative Impact AES-3 represents the potential for the proposed Project, along with related cumulative projects, to result in significant impacts on the cumulative study area through degradation of visual character, including negative shadow effects that would affect shade-sensitive receptors. This criterion is related to the State CEQA Guidelines Appendix G Aesthetics checklist question "Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?" and the *L.A. CEQA*

Thresholds Guide factors for determining significance under the aesthetics and shading visual elements.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As discussed above, over the course of the past century, the construction of Port infrastructure and other past, present, and future projects within the Port Complex have contributed and will continue to contribute to this heavily altered and man-made view of a working Port. Continued development associated with terminal projects such as the TraPac (#2), YTI (#4), China Shipping (#7), Yang Ming (#14), APL (#26), and PBF Energy (#35), along with the proposed Project, would increase the scale of development (due to the size and number of cranes and vessels calling at the berths) within the Port. As a result, the existing visual quality from many of the scenic points with views into the Port is low to moderately low due to the prominent visibility of intensive shipping and industrial port operations.

The above mentioned, and other related projects would result in construction of features that would be similar to existing development and would not contrast with, or substantially degrade existing visual character. Therefore, given the existing working port setting, the cumulative impacts on visual character would not be significant under CEQA.

Contribution of the Proposed Project

The proposed Project's cranes or other equipment would not substantially degrade the visual character of the project area because its features would be consistent with surrounding development and uses. Shading produced by cranes, containers, or other structures would be limited to within the Project site and adjacent waterways and industrial uses. Cumulative Impact AES-3 is not a NEPA issue of concern.

Because the proposed Project would be consistent with surrounding uses, it would not make a cumulatively considerable contribution to a significant cumulative impact to visual character under CEQA. Cumulative Impact AES-3 is not a NEPA issue of concern.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to visual character. Cumulative Impact AES-3 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required. Cumulative Impact AES-3 is not a NEPA issue of concern.

4.2.1.5 Cumulative Impact AES- 4: The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact due to creating a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area—Less than Cumulatively Considerable

Cumulative Impact AES-4 represents the potential for the proposed Project and related cumulative projects to result in significant cumulative impacts in the cumulative study area through the creation of a new source of substantial light or glare that would adversely affect day or nighttime views. This criterion is related to the State CEQA Guidelines Appendix G Aesthetics checklist question "Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?" and the *L.A. CEQA Thresholds Guide* factors for determining significance under the Nighttime Illumination visual element (City of Los Angeles, 2006).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The Port is a highly urbanized area with a substantial amount of existing nighttime illumination. The major sources of illumination at the Port are the hundreds of down-lights and floodlights attached to the tops of the tall light standards and street and roadway lighting. Other sources include high-intensity boom lights on top of cranes and floodlights attached to the bottom and sides of the cranes that illuminate the cranes, the vessels, and the immediately surrounding area during loading or unloading of vessels. Past projects at the Port have contributed to an increase in ambient illumination levels in nearby areas. Thus, the net effect of the past projects has been to create a significant cumulative impact. However, because of the standards that the Port is now implementing to minimize the lighting impacts of new projects, the contributions of present and future projects to cumulative lighting impacts in the area will be limited.

The related projects listed in Table 4-1 that have the capability of contributing the most light, glare and daytime or nighttime views in the proposed Project area through the use of cranes, lighted backlands, or other uses that need extra lighting include TraPac (#2), YTI (#4), China Shipping (#7), Yang Ming (#14), and APL (#26). This new lighting would be required to comply with the new Port standards put in place to minimize the lighting impacts of new projects, including providing shielding and directing lights downward to minimize off-site spill over. Since the existing levels of ambient lighting in the area are already high, adding new light sources that comply with the new Port standards would not result in a significant new source of substantial light, or glare that would adversely affect daytime or nighttime views in the area. As such, the net effect of each of the past, present, and reasonably foreseeable future related projects would not be cumulatively considerable.

Contribution of the Proposed Project

As documented in the analysis in Section 3.1.4.3 under Impact AES-4, the incremental change in ambient lighting conditions associated with the proposed Project as a result of the crane raising and five additional operating cranes at the Project site would not create a substantial change in existing levels of ambient light within sensitive areas in the

proposed Project vicinity. Additionally, the lighting has been designed in a way to minimize off-project light spill, and because of the distance of the planned light fixtures from areas of potential sensitivity, the proposed Project lighting would not adversely affect nearby light-sensitive areas. Since much of the area near the Project site consists of lands used for Port activities that are intensively illuminated, in most areas near the proposed Project and on the streets that serve them, the level of sensitivity to changes in nighttime lighting conditions brought about by the proposed Project is low. Further, lighting design measures would minimize and keep the Project-level lighting impacts of the proposed Project below significance; therefore, the proposed Project would not make a significant impact related to light and glare, and the new crane and backland lighting from the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Cumulative Impact AES-4 is not a NEPA issue of concern.

Contribution of the Alternatives

No new lighting would be implemented under Alternative 2; thus, Alternative 2 would not contribute to a cumulatively significant impact related to light and glare under CEQA. For the same reasons as discussed for the proposed Project, design guidelines and regulations would minimize lighting effects and keep lighting impacts of Alternatives 1, and 3 through 5 below significance, and these alternatives would not make a cumulatively considerable contribution to a significant light and glare impact under CEQA. Cumulative Impact AES-4 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required. Cumulative Impact AES-4 is not a NEPA issue of concern.

4.2.1.6 Cumulative Impact AES-5: The proposed Project would not contribute to negative changes to the overall visual character and quality of a landscape that have a cumulatively considerable effect on viewer response—Less than Cumulatively Considerable

Cumulative Impact AES-5 represents the potential of the proposed Project along with other cumulative projects to contribute to negative changes to the overall visual character and quality of the landscape. Factors considered in making this determination include the existing character and quality of important views toward the Project site as evaluated in terms of the variables used by the federal visual resource analysis methods. It also includes the degree to which the proposed Project or alternative would change the character and quality of those views and the significance of those changes in light of the public's degree of sensitivity toward the views. Section 3.1.4.2 presents the methods and standards applied to make this determination.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As described under Cumulative Impact AES-1, past and present projects at the Port and in the surrounding region have altered the character and quality of the views from many

of the viewpoints used as the basis for this analysis, and future projects have the potential to bring about further changes to these views.

The views that were analyzed for the proposed Project include locally designated scenic highways (Front Street and Harbor Boulevard) and public viewpoints (the Main Channel and San Pedro Waterfront), residential neighbors in San Pedro, and fleeting views available to motorist traveling on the Vincent Thomas Bridge. As described in detail in Section 3.1.2.4, views from these locations include the busy working Port and the San Pedro Waterfront and ocean to varying degrees, depending on elevation and distance.

As discussed in AES-1, the area within the Port has already been graded and developed, which constitutes the baseline conditions. Present and reasonably foreseeable future projects at the Port would generally be built on previously developed land and include features that would be similar to existing development and thus the overall visual quality of the area. Additionally, the present and reasonably foreseeable future related projects would not obstruct available views of the working port and horizon beyond from the analyzed viewpoints. Therefore, given the existing working Port setting, the cumulative impacts of past, present, and reasonably foreseeable future projects combined would not result in a significant cumulative impact under NEPA.

Contribution of the Proposed Project

As discussed under Cumulative Impact AES-1, the visual changes associated with the proposed Project would be consistent with the character of the existing views from each of the viewpoints analyzed in Section 3.1 and described in Table 3.1-3. The Project site is within a highly industrialized area within the Port and views from surrounding viewpoints, including scenic routes and scenic vantage points, are often fleeting, distant, and/or obstructed by intervening topography and development. The overall effect of the proposed Project would be to increase the level of development of the existing Everport Container Terminal. The development would support similar activities to those that are currently occurring at the Project site and would add to the complex scene in the middle ground zone of most views. The new development would be visually compatible with the overall character of the view as a working Port environment. Furthermore, views of the Vincent Thomas Bridge from sensitive viewing areas would not be obstructed. Thus, the proposed Project would not contribute to negative changes to the overall visual character and quality of a landscape and thus would not make a cumulatively considerable contribution to a significant cumulative impact on viewer response under NEPA. Cumulative Impact AES-5 is not a CEQA issue of concern.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1, 3, 4 and 5 would not make a cumulatively considerable contribution to a significant cumulative impact to scenic resources under NEPA. Alternative 2 is not required to be analyzed under NEPA. Cumulative Impact AES-5 is not a CEQA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant impact under NEPA. Therefore, no mitigation measures would be required.

4.2.2 Air Quality and Meteorology

4.2.2.1 Scope of Analysis

The region of analysis for cumulative effects on regional air quality (Cumulative Impacts AQ-1 and AQ-3) is the South Coast Air Basin (SCAB). For localized effects of air quality (Cumulative Impacts AQ-2 and AQ-4), the SCAQMD typically assesses cumulative projects within one mile of a project site. For health effects (Cumulative Impact AQ-7), the area of influence includes the cumulative projects within the Port complex and their effects on the surrounding communities of San Pedro, Wilmington, and Long Beach.

4.2.2.2 Significance Criteria

Criteria Pollutants

As described in Section 3.2, air quality within the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly due to lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by SCAQMD. This trend towards cleaner air has occurred despite continued population growth. However, stationary industrial and mobile emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion combine to create adverse pollution effects in the SCAB. The SCAB is an "extreme" nonattainment area for ozone (8-hour standard), a "serious" nonattainment area for fine particulate matter ($PM_{2.5}$), and a nonattainment area (partial area) for lead in regards to the National Ambient Air Quality Standards (NAAQS). The SCAB is in attainment of the NAAQS for PM_{10}, carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). In regards to the California Ambient Air Quality Standards (CAAQS), the SCAB is presently in nonattainment for ozone and PM_{10}. The SCAB is in attainment of the CAAQS for SO_2, CO, NO_2, lead, and sulfates and is unclassified for hydrogen sulfide and visibility-reducing particles (CARB, 2015). In addition, the 2012 AQMP predicts attainment of all NAAQS within the SCAB, including $PM_{2.5}$ by 2014 and ozone by 2023 (SCAQMD, 2013). However, the predictions for $PM_{2.5}$ and ozone attainment are speculative at this time.

Contribution of the proposed Project and alternatives to cumulative impacts was assessed using SCAQMD's guidance, which states that projects that exceed SCAQMD's project-level significance thresholds are considered by SCAQMD to be cumulatively considerable. Conversely, projects that do not exceed the project-level thresholds are generally not considered to be cumulatively considerable. Significance thresholds are presented in Section 3.2.4.4. SCAQMD guidance does not distinguish between attainment and nonattainment pollutants and this analysis assumes that (for Cumulative Impacts AQ-1, AQ-2, AQ-3, AQ-4, and AQ-5) exceedance of any project-level threshold would also constitute a cumulatively considerable impact. Cumulative Impact AQ-6 is addressed qualitatively, in accordance with SCAQMD's qualitative threshold.

Toxic Air Contaminants

SCAQMD's MATES IV study (SCAQMD, 2015) showed that the cancer risk in 2012 from toxic air contaminants was estimated at roughly 480 in a million in the San Pedro and Wilmington areas. In the Diesel Particulate Matter Exposure Assessment Study for

the Ports of Los Angeles and Long Beach, CARB also estimated that elevated levels of cancer risk due to operational emissions from port-area sources occur within and near the ports (CARB, 2006). To reduce port-related cancer risks in proximate communities, the Ports of Los Angeles and Long Beach approved port-wide air pollution control measures through implementation of the CAAP, designed with the goal of reducing diesel particulate matter (DPM) emissions by 85 percent (POLA and POLB, 2010). In developing the San Pedro Bay Standards, the Port recognized the importance of ensuring that new projects are designed to be consistent with the CAAP as well as with other applicable regulations allowing the Port to meet long-term health risk and emission reduction goals.

Whereas the evaluations of cumulative impacts for criteria pollutants use the SCAQMD's guidance, which states that projects that exceed the project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable (SCAQMD, 2003), this approach is not used to evaluate health risks. Rather, given the existing elevated cancer risk in communities proximate to the Port, as documented in the MATES IV study, this analysis conservatively assumes that (for Cumulative Impact AQ-7) impacts that would be below the SCAQMD threshold but above the CEQA or NEPA baseline would be cumulatively considerable.

4.2.2.3 Cumulative Impact AQ-1: The proposed Project would contribute to cumulatively considerable construction-related emissions that exceed an SCAQMD threshold of significance – Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The proposed Project would be constructed over approximately 24-months, and the soonest construction could start is in beginning in fourth quarter 2017. Several large construction projects could occur concurrently at the Port and surrounding areas (see Table 4-1), and these include Valero (#1), TraPac (#2), YTI (#4), China Shipping (#7), Phillips 66 (#10), Yang Ming (#14), WWL Cargo (#16), Shell (#31), and PBF Energy (#35). The construction impacts of the related projects would be cumulatively significant if their combined construction emissions would exceed the SCAQMD daily emission thresholds for construction. Because this almost certainly would be the case for all analyzed criteria pollutants and precursors (PM_{10}, $PM_{2.5}$, nitrogen oxides [NO_X], sulfur oxides [SO_X], CO, and volatile organic compounds [VOCs]), the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, NO_X, SO_X, CO and VOC.

Contribution of the Proposed Project (Prior to Mitigation)

Proposed project construction emissions would exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and for VOC in 2019 under CEQA. Construction emissions would also exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and VOC in 2019 under NEPA. Therefore, unmitigated proposed Project construction emissions would be significant under for NO_X and VOC prior to mitigation under CEQA and NEPA. These impacts would combine with cumulatively significant impacts from concurrent related construction projects listed above, and potentially other related projects. As a result, without mitigation, proposed Project construction emissions would

make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X and VOC emissions under CEQA and NEPA.

Proposed Project overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for NO_X under CEQA. Overlapping construction and terminal operational emissions would also exceed SCAQMD significance thresholds for $PM_{2.5}$, NOx, and VOC under NEPA. These impacts would combine with cumulatively significant impacts from concurrent related construction projects. As a result, without mitigation, the proposed Project overlapping construction and operational emissions would make a cumulatively considerable contribution to a significant cumulative impact for NO_X under CEQA, and for $PM_{2.5}$, NO_X, and VOC under NEPA.

Contribution of the Alternatives

Alternative 1 construction emissions would exceed SCAQMD significance thresholds for NO_X in 2018 and 2019 under CEQA. In addition, emissions from overlapping construction and operation would exceed the threshold for NOx. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 1 construction emissions would make a cumulatively considerable contribution to a significant cumulative impact for NO_X emissions under CEQA. Alternative 1 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 1 and the NEPA baseline and no impact under NEPA.

Alternative 2 would have no construction activities and would therefore not make a cumulatively considerable contribution to an existing significant cumulative impact under CEQA. Since NEPA requires the evaluation of a No Federal Action alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

Alternative 3 construction emissions would exceed SCAQMD significance thresholds for NO_X and VOC in 2018 and 2019 under CEQA and NEPA. Alternative 3 overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for NO_X and VOC under CEQA, and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 3 construction emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X and VOC under CEQA and NEPA.

Alternative 4 construction emissions would exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and VOC in 2019 under CEQA and NEPA. Alternative 4 overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for NO_X under CEQA; and for NO_X and VOC under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, Alternative 4 construction would make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X and VOC under CEQA and under NEPA.

Alternative 5 construction emissions would exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and VOC in 2019 under CEQA and NEPA. Alternative 5 overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for NO_X under CEQA; and for NO_X, VOC and $PM_{2.5}$ under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, Alternative 5 construction would make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X and VOC under CEQA, and for NO_X, VOC, and $PM_{2.5}$ under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation (measures MM AQ-1 through MM AQ-5), proposed Project construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and for VOC in 2019 under CEQA and NEPA. For overlapping construction and operations under CEQA, the mitigation measures would reduce the emissions, but would continue to exceed SCAQMD significance thresholds for NO_X in 2019. Under NEPA, mitigation would reduce $PM_{2.5}$ emissions from overlapping construction and operation to a less than significant level, but NO_X and VOC would remain significant. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_X and VOC emissions under CEQA and under NEPA.

After mitigation (mitigation measures MM AQ-2 through MM AQ-5), NO_X emissions from construction of Alternative 1 would be reduced to a less than significant level under CEQA. Because the mitigation NO_X emission would be less than the significance threshold, it would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Alternative 1 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 1 and the NEPA baseline and no impact under NEPA.

Alternative 2 would have no construction activities and would therefore not make a considerable contribution to an existing significant cumulative impact.

After mitigation (measures MM AQ-1 through MM AQ-5), Alternative 3 construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and for VOC in 2019 under CEQA and NEPA. For overlapping construction and operations, the mitigation measures would reduce the emissions, but would continue to exceed SCAQMD significance thresholds for NO_X in 2019 under CEQA. Under NEPA, mitigation would reduce emissions, but NOx and VOC would remain significant. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. Therefore, after mitigation, construction of Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_X and VOC emissions under CEQA and under NEPA.

After mitigation (measures MM AQ-1 through MM AQ-5), Alternative 4 construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and for VOC in 2019 under CEQA and NEPA.

For overlapping construction and operations, the mitigation measures would reduce Alternative 4 emissions, but would continue to exceed SCAQMD significance thresholds for NO_X in 2019 under CEQA. Under NEPA, mitigation would reduce overlapping VOC emissions under Alternative 4 to a less than significant level, but NOx would remain significant. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. Therefore, after mitigation, construction of Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_X and VOC emissions under CEQA and under NEPA.

After mitigation (measures MM AQ-1 through MM AQ-5), Alternative 5 construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X in 2018 and 2019, and for VOC in 2019 under CEQA and NEPA. For overlapping construction and operations under CEQA, the mitigation measures would reduce the emissions, but would continue to exceed SCAQMD significance thresholds for NO_X in 2019. Under NEPA, mitigation would reduce $PM_{2.5}$ emissions from overlapping construction and operation to a less than significant level, but NOx and VOC would remain significant. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_X and VOC emissions under CEQA and under NEPA.

4.2.2.4 Cumulative Impact AQ-2: The proposed Project or alternative construction would result in off-site ambient air pollutant concentrations that exceed the SCAQMD thresholds of significance or substantially contribute to an existing or projected air quality standard violation—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Several large construction projects would occur concurrently at the Port and surrounding areas (see Table 4-1), and these include. Valero (#1), TraPac (#2), YTI (#4), China Shipping (#7), Phillips 66 (#10), Yang Ming (#14), WWL Cargo (#16), Shell (#31), and PBF Energy (#35). The construction impacts of the related projects would be cumulatively significant if their combined construction ambient pollutant concentrations would exceed the ambient concentration thresholds for construction. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for PM_{10}, and $PM_{2.5}$, and NO_2. The cumulative impacts are unlikely to exceed the thresholds for CO because the entire SCAB is in attainment for CO, and Project-level evaluations for other large Port projects have modeled CO levels below the CO threshold, even at congested intersections. Consequently, construction of the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, and NO_2.

Contribution of the Proposed Project (Prior to Mitigation)

Construction of the proposed Project would exceed the federal 1-hour ambient air thresholds for NO_2 under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects listed above, and potentially other related projects, which would be cumulatively significant. As a result, without mitigation, impacts from proposed Project construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA.

Overlapping construction and operations of the proposed Project would exceed the federal 1-hour NO_2, the 24-hour PM_{10}, and annual PM_{10} ambient air thresholds under CEQA, and only the federal 1-hour NO_2 ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from proposed Project overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 and PM_{10} levels under CEQA; and NO_2 levels under NEPA.

Contribution of the Alternatives

Construction of Alternative 1 would exceed the federal 1-hour NO_2 ambient air thresholds under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 1 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA. Overlapping construction and operations of Alternative 1 would exceed the annual PM_{10} ambient air thresholds under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 1 overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 and PM_{10} levels under CEQA. Alternative 1 would have the same conditions as the NEPA baseline, therefore there would be no impacts under NEPA.

Alternative 2 would have no construction activities and would therefore not make a cumulatively considerable contribution to a significant cumulative impact to air quality under CEQA. Since NEPA requires the evaluation of a No Federal Action alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

Construction of Alternative 3 would exceed the federal 1-hour ambient air thresholds for NO_2 under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 3 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA. Overlapping construction and operations of Alternative 3 would exceed the 24-hour PM_{10} and annual PM_{10} ambient air thresholds under CEQA, and only the federal 1-hour NO_2 ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 3 overlapping construction and operations would make a

cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2 levels under NEPA.

Construction of Alternative 4 would exceed the federal 1-hour ambient air thresholds for NO_2 under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 4 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA. Overlapping construction and operations of Alternative 4 would exceed the annual PM_{10} ambient air thresholds under CEQA; and the federal 1-hour NO_2 ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 4 overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2 levels under NEPA.

Construction of Alternative 5 would exceed the federal 1-hour and state 1-hour ambient air thresholds for NO_2 under CEQA, and the federal 1-hour threshold for NO_2 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 5 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA. Overlapping construction and operations of Alternative 5 would exceed the 24-hour and annual PM_{10} ambient air thresholds under CEQA; and the federal 1-hour NO_2 ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 5 overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2 levels under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation (measures MM AQ-1 through MM AQ-5), proposed Project construction impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour NO_2 under CEQA. Impacts would also be reduced but would continue to exceed significance thresholds for federal 1-hour NO_2 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 under CEQA and NEPA.

After mitigation, proposed Project overlapping construction and operations impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour NO_2, 24-hour PM_{10} and annual PM_{10} under CEQA. Impacts would also be reduced but would continue to exceed significance thresholds for federal 1-hour NO_2 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, overlapping construction and operations of the proposed Project would make a

cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA and for NO_2 under NEPA.

After mitigation (measures MM AQ-2 through MM AQ-5), Alternative 1 construction impacts would be reduced but would continue to exceed significance thresholds for federal 1-hour NO_2 and PM_{10} under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. Therefore, after mitigation, construction of Alternative 1 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_2 and PM_{10} under CEQA. Alternative 1 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 1 and the NEPA baseline and no impact under NEPA.

Alternative 2 would have no construction activities and would therefore not make a cumulatively considerable contribution to a significant cumulative impact to air quality under CEQA. Since NEPA requires the evaluation of a No Federal Action alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

After mitigation (measures MM AQ-1 through MM AQ-5), construction of Alternative 3 would exceed the federal 1-hour ambient air thresholds for NO_2 under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, after mitigation, impacts from Alternative 3 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA. Overlapping construction and operations of Alternative 3 would exceed the 24-hour PM_{10} and annual PM_{10} ambient air thresholds after mitigation under CEQA, and the federal 1-hour NO_2 ambient air thresholds after mitigation under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, after mitigation, impacts from Alternative 3 overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2 levels under NEPA.

After mitigation (measures MM AQ-1 through MM AQ-5), construction of Alternative 4 would exceed the federal 1-hour ambient air thresholds under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, with mitigation, impacts from Alternative 4 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA. Overlapping construction and operations of Alternative 4, with mitigation, would exceed the annual PM_{10} ambient air thresholds under CEQA; and the federal 1-hour NO_2 ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, with mitigation, impacts from Alternative 4 overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2 levels under NEPA.

After mitigation (measures MM AQ-1 through MM AQ-5), construction of Alternative 5 would exceed the federal 1-hour ambient air thresholds for NO_2 under CEQA (the state 1-hour NO_2 levels would be reduced to a less than significant level), and the federal 1-hour

threshold for NO_2 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 5 construction would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2 levels under CEQA and NEPA. Overlapping construction and operations of Alternative 5, with mitigation, would exceed the 24-hour and annual PM_{10} ambient air thresholds under CEQA; and the federal 1-hour NO_2 ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would be cumulatively significant. As a result, with mitigation, impacts from Alternative 5 overlapping construction and operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2 levels under NEPA.

4.2.2.5 Cumulative Impact AQ-3: The operation of the proposed Project would produce a cumulatively considerable increase of a criteria pollutant that exceeds the SCAQMD peak day emission thresholds of significance—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of related projects concurrently at the Port and surrounding areas (see Table 4-1) include Valero (#1), TraPac (#2), Berths 191-194 Dry Bulk Terminal (#3), YTI (#4), Pasha Peel Off yard (#5), China Shipping (#7), Harbor Performance Enhancement Center (#8), Phillips 66 (#10), Yang Ming (#14), WWL Cargo (#16), Shell (#31), PBF Energy (#35), Middle Harbor (#48), Pier G & J (#49), and potentially other related projects, which would contribute to cumulatively significant air quality impacts. The operational impacts of related projects would be cumulatively significant if their combined operational emissions would exceed the SCAQMD daily emission thresholds for operations. Because this almost certainly would be the case for all analyzed criteria pollutants and precursors, the related projects would result in a significant cumulative air quality criteria pollutant impact.

Contribution of the Proposed Project (Prior to Mitigation)

Proposed Project operational emissions would exceed SCAQMD significance thresholds for NO_X in 2019, 2033, and 2038, and for CO and VOC in 2033 and 2038 under CEQA. Operational emissions would also exceed SCAQMD significance thresholds for NO_X in 2019, 2026, 2033, and 2038, and for CO, VOC, and $PM_{2.5}$ in 2033 and 2038 under NEPA. These impacts would combine with impacts from concurrent related projects discussed above, which would already be cumulatively significant. As a result, without mitigation, proposed Project operational emissions would make a cumulatively considerable contribution to a significant cumulative impact for NO_X, CO, and VOC under CEQA, and for NO_X, CO, VOC, and $PM_{2.5}$ under NEPA.

Contribution of the Alternatives

Alternative 1 operational emissions would exceed SCAQMD significance thresholds for NO_X in 2019, 2033, and 2038; and CO and VOC in 2033 and 2038 under CEQA. These impacts would combine with impacts from concurrent related projects, which would be

cumulatively significant. As a result, without mitigation, Alternative 1 impacts would make a cumulatively considerable contribution to a significant cumulative impact for NO_X, CO, and VOC under CEQA. Alternative 1 would have the same conditions as the NEPA baseline, therefore there would be no impacts under NEPA.

Alternative 2 operational emissions would exceed SCAQMD significance thresholds for NO_X in 2019, 2033, and 2038; and CO and VOC in 2033 and 2038 under CEQA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, Alternative 2 impacts would make a cumulatively considerable contribution to a significant cumulative impact for NOx, CO, and VOC under CEQA. Since NEPA requires the evaluation of a No Federal Action Alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

Alternative 3 operational emissions would exceed SCAQMD significance thresholds for NO_X, CO, and VOC in 2033 and 2038 under CEQA. Operational emissions would exceed SCAQMD significance thresholds for NO_X in 2019, 2026, 2033, and 2038; and for CO, VOC, and $PM_{2.5}$ in 2033 and 2038 under NEPA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, Alternative 3 operational emissions would make a cumulatively considerable contribution to a significant cumulative impact for NO_X, CO, and VOC under CEQA; and for NO_X, CO, VOC, and $PM_{2.5}$ under NEPA.

Alternative 4 operational emissions would exceed SCAQMD significance thresholds for NO_X and CO in 2033 and 2038 under CEQA. Operational emissions would exceed SCAQMD significance thresholds for NO_X in 2019, 2026, 2033, and 2038 under NEPA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, Alternative 4 operational emissions would make a cumulatively considerable contribution to a significant cumulative impact for NO_X and CO under CEQA; and for NO_X under NEPA.

Alternative 5 operational emissions would exceed SCAQMD significance thresholds for NO_X, in 2019, 2033, and 2038; and for CO, and VOC in 2033 and 2038 under CEQA. Operational emissions would exceed SCAQMD significance thresholds for NO_X in 2019, 2026, 2033, and 2038; for CO and $PM_{2.5}$ in 2033 and 2038, and for VOC in 2026, 2033, and 2038 under NEPA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, Alternative 5 operational emissions would make a cumulatively considerable contribution to a significant cumulative impact for NO_X, CO, and VOC under CEQA; and for NO_X, CO, VOC, and $PM_{2.5}$ under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation (measures MM AQ-6 and MM AQ-7), proposed Project NOx emissions in 2019, 2033, and 2038 would be reduce to a less than significant level; however, operational emissions would continue to exceed SCAQMD significance thresholds for CO, and VOC in 2033 and 2038 under CEQA. Proposed Project operational emissions for NOx in 2019, VOC in 2026, and $PM_{2.5}$ in 2033 and 2038 would be reduced to a less than significant level; however, operational emissions would continue to exceed SCAQMD significance thresholds for NO_X in 2026, 2033, and 2038; for CO and VOC in 2033 and 2038 under NEPA. These impacts would combine with impacts from

concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for CO and VOC emissions under CEQA; and for NO_X, CO, and VOC under NEPA.

Alternative 1 operational emissions, with mitigation measures MM AQ-6 and MM AQ-7, would continue to exceed the SCAQMD significance thresholds for CO and VOC in 2033 and 2038. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, Alternative 1 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for CO and VOC emissions under CEQA. Alternative 1 would have the same conditions as the NEPA baseline, therefore there would be no impacts under NEPA.

Alternative 2 operational emissions would exceed the SCAQMD significance thresholds for NOx in 2019, 2033, and 2038 and CO and VOC in 2033 and 2038. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, Alternative 2 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NOx, CO and VOC emissions under CEQA. Since NEPA requires the evaluation of a No Federal Action Alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

Alternative 3 operational emissions, with mitigation measures MM AQ-6 and MM AQ-7, would continue to exceed the SCAQMD significance thresholds for CO and VOC in 2033 and 2038 under CEQA; and under NEPA, would continue to exceed the significance thresholds for NO_X in 2026, 2033, and 2038 and CO in 2033 and 2038. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for CO and VOC emissions under CEQA, and for NOx and CO under NEPA.

Alternative 4 operational emissions, with mitigation measures MM AQ-6 and MM AQ-7, would continue to exceed the SCAQMD significance thresholds for CO in 2033 and 2038 under CEQA; and under NEPA, would continue to exceed the significance thresholds for NOX in 2026, 2033, and 2038. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for CO emissions under CEQA, and for NOx under NEPA.

Alternative 5 operational emissions, with mitigation measures MM AQ-6 and MM AQ-7, would continue to exceed the SCAQMD significance thresholds for CO and VOC in 2033 and 2038 under CEQA; and under NEPA, would continue to exceed the significance thresholds for NOX in 2026, 2033, 2038 and CO and VOC in 2033 and 2038. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for CO and VOC emissions under CEQA, and for NOx, CO and VOC under NEPA.

4.2.2.6 Cumulative Impact AQ-4: The operation of the proposed Project would produce emissions that cumulatively exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of related projects concurrently at the Port and surrounding areas (see Table 4-1) include: Valero (#1), TraPac (#2), Berths 191-194 Dry Bulk Terminal (#3), YTI (#4), Pasha Peel Off yard (#5), China Shipping (#7), Harbor Performance Enhancement Center (#8) Phillips 66 (#10), Yang Ming (#14), WWL Cargo (#16), Shell (#31), PBF Energy (#35), Middle Harbor (#48), Pier G & J (#49), and potentially other related projects, which would contribute to cumulatively significant air quality impacts. The operations impacts of related projects would be cumulatively significant if their combined operations ambient pollutant concentrations would exceed the ambient concentration thresholds for operations. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for PM_{10}, $PM_{2.5}$, and NO_2. The cumulative impacts are unlikely to exceed the thresholds for CO because the entire SCAB is in attainment for CO, and Project-level evaluations for other large Port projects have modeled CO levels below the CO threshold, even at congested intersections. Consequently, operation of the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, and NO_2.

Contribution of the Proposed Project (Prior to Mitigation)

Operation of the proposed Project would exceed the federal 1-hour NO_2, the 24-hour and annual PM_{10}, and the $PM_{2.5}$ ambient air thresholds under CEQA; and the 24-hour and annual PM_{10} ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related projects described above, which would be cumulatively significant. As a result, without mitigation, impacts from proposed Project operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2, PM_{10}, and $PM_{2.5}$ levels under CEQA, and PM_{10} levels under NEPA.

Contribution of the Alternatives

Alternative 1 operations would exceed the federal 1-hour NO_2, the 24-hour and annual PM_{10}, and the $PM_{2.5}$ ambient air thresholds under CEQA. Impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 1 operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2, PM_{10}, and $PM_{2.5}$ levels under CEQA. Alternative 1 would have the same conditions as the NEPA baseline, therefore, there would be no impacts under NEPA.

Alternative 2 operations would exceed the 24-hour and annual PM_{10} ambient air thresholds under CEQA. Impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 2 operations would make a cumulatively considerable

contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA. Since NEPA requires the evaluation of a No Federal Action Alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

Operation of Alternatives 3 and 5 would have the same impact determinations are the proposed Project; operations would exceed the federal 1-hour NO_2, the 24-hour and annual PM_{10}, and the $PM_{2.5}$ ambient air thresholds under CEQA; and the 24-hour and annual PM_{10} ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 3 and Alternative 5 operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_2, PM_{10}, and $PM_{2.5}$ levels under CEQA; and PM_{10} levels under NEPA.

Operation of Alternative 4 would exceed the 24-hour and annual PM_{10} ambient air thresholds under CEQA; and the federal 1-hour and state annual NO_2, and the 24-hour and annual PM_{10} ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. As a result, without mitigation, impacts from Alternative 4 operations would make a cumulatively considerable contribution to a significant cumulative impact related to ambient PM_{10} levels under CEQA; and NO_2, and PM_{10} levels under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation (measures MM AQ-6 and MM AQ-7), proposed Project impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour NO_2, the 24-hour and annual PM_{10}, and the $PM_{2.5}$ ambient air thresholds under CEQA; and the 24-hour and annual PM_{10} ambient air thresholds under NEPA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_2, PM_{10} and $PM_{2.5}$ under CEQA and PM_{10} under NEPA.

After mitigation (measures MM AQ-6 and MM AQ-7), Alternative 1 impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour NO_2, the 24-hour and annual PM_{10}, and the $PM_{2.5}$ ambient air thresholds under CEQA. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, after mitigation, Alternative 1 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2, PM_{10} and $PM_{2.5}$ under CEQA. Alternative 1 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 1 and the NEPA baseline and no impact would occur under NEPA.

Mitigation is not required under Alternative 2 because there would be no discretionary action under CEQA. Alternative 2 impacts would continue to exceed significance thresholds for the 24-hour and annual PM_{10} levels. These impacts would combine with impacts from concurrent related projects, which would be cumulatively significant. Therefore, Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact forPM_{10} under CEQA. Since

NEPA requires the evaluation of a No Federal Action Alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

After mitigation (measures MM AQ-6 and MM AQ-7), Alternative 3 and Alternative 5 would have the same impact determination as the proposed Project; operations would continue to exceed significance thresholds for the federal 1-hour NO_2, the 24-hour and annual PM_{10}, and the $PM_{2.5}$ ambient air thresholds under CEQA; and the 24-hour and annual PM_{10} ambient air thresholds under and NEPA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, after mitigation, Alternative 3 and Alternative 5 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2, and PM_{10} and $PM_{2.5}$ under CEQA and PM_{10} under NEPA.

After mitigation (measures MM AQ-6 and MM AQ-7), Alternative 4 would continue to exceed significance thresholds for the 24-hour and annual PM_{10} ambient air thresholds under CEQA; and the federal 1-hour and state annual NO_2 and the 24-hour and annual PM_{10} ambient air thresholds under and NEPA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, after mitigation, Alternative 4 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for PM_{10} under CEQA; and NO_2 and PM_{10} under NEPA.

4.2.2.7 Cumulative Impact AQ-5: The operation of the proposed Project would not create on-road traffic that would contribute to an exceedance of the 1-Hour or 8-Hour CO standards—Less than Cumulatively Considerable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Concurrent related projects at the Port and surrounding areas (see Table 4-1) include: Valero (#1), TraPac (#2), Berths 191-194 Dry Bulk Terminal (#3), YTI (#4), Pasha Peel Off yard (#5), China Shipping (#7), Harbor Performance Enhancement Center (#8), Yang Ming (#14), WWL Cargo (#16), Shell (#31), Middle Harbor (#48), Pier G & J (#49), and potentially other related projects, which would result in significant cumulative impacts to air quality if they generate traffic levels that cause exceedances of the ambient air quality standards for CO near roadways and intersections. Although it is possible that localized CO concentrations could exceed standards, the air basin is in attainment on a regional basis for CO standards. This trend is likely to continue in the future as more stringent vehicle emission standards are implemented and older vehicles are gradually replaced with newer, cleaner vehicles. The impacts of related projects would therefore be less than cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

Based on the CO hotspot modeling analysis, which includes cumulative growth in traffic levels, significant CO hotspot impacts under CEQA and NEPA for proposed Project operation are not anticipated because CO standards would not be exceeded and emission standards are expected to become more stringent in the future. As a result, proposed Project operations would not make a cumulatively considerable contribution to cumulative CO hot spot impacts under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to cumulative CO hot spot impacts under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and alternatives would not make a cumulatively considerable contribution to cumulative CO hot spot impacts.

4.2.2.8 Cumulative Impact AQ-6: The operation of the proposed Project would not create objectionable odors at the nearest sensitive receptor—Less than Cumulatively Considerable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

There are temporary and semi-permanent sources of odors within the Port region, including mobile sources powered by diesel and residual fuels and stationary industrial sources. Concurrent related projects at the Port and surrounding areas (see Table 4-1) that could be sources of odors include: Valero (#1), TraPac (#2), Berths 191-194 Dry Bulk Terminal (#3), YTI (#4), Pasha Peel Off yard (#5), China Shipping (#7), Harbor Performance Enhancement Center (#8), Yang Ming (#14), WWL Cargo (#16), Shell (#31), Middle Harbor (#48), Pier G & J (#49), and potentially other related projects. Some individuals may find that diesel combustion emission odors are objectionable in nature, although quantifying the odorous impacts of these emissions on the public is difficult. Due to the mobile nature of Project emission sources and the distance between residents (sensitive receptors) and the Project site, odorous emissions in the proposed Project region would be less than cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

Operation of the proposed Project would increase diesel emissions within and near the Port. The mobile nature of most Project emission sources would serve to disperse proposed Project emissions. Additionally, the distance between proposed Project emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. As a result, proposed Project operations would not make a considerable contribution to cumulative odor impacts under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to cumulative odor impacts under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and alternatives would not make a cumulatively considerable contribution to cumulative odor impacts.

4.2.2.9 Cumulative Impact AQ-7: The proposed Project would expose receptors to significant levels of toxic air contaminants—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The Multiple Air Toxics Exposure Study (MATES-II) conducted by SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the SCAB to be 1,400 in a million (SCAQMD, 2000). In MATES III, completed by SCAQMD (SCAQMD, 2008), the cancer risk from TACs was estimated at 1,000 to 2,000 in a million in the San Pedro and Wilmington areas. SCAQMD determined in MATES IV that overall, there was decrease in risk as compared to MATES III (SCAQMD, 2015). The MATES IV study showed a 70 percent average reduction of diesel particulate matter (DPM) levels and an average carcinogenic risk reduction of an approximately 66 percent in the Ports area and 56 percent in other areas of the Basin from the MATES III study (SCAQMD, 2015). Specifically, the MATES IV study showed that the cancer risk in 2012 from toxic air contaminants was estimated at roughly 480 in a million in the San Pedro and Wilmington areas, less than documented in the previous studies.

In the Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach, CARB estimated that elevated levels of cancer risks due to operational emissions from port-area sources occur within and near the Ports (CARB, 2006). Based on this information, cancer risk from TAC emissions within the Project region, including TAC emissions likely to be emitted from Valero (#1), TraPac (#2), Berths 191-194 Dry Bulk Terminal (#3), YTI (#4), Pasha Peel Off yard (#5), China Shipping (#7), Harbor Performance Enhancement Center (#8), Yang Ming (#14), WWL Cargo (#16), Shell (#31), Middle Harbor (#48), Pier G & J (#49), potentially other related projects, and the proposed Project, is considered a significant cumulative impact. Non-cancer impacts associated with past, present, and reasonably foreseeable projects in the proposed Project area were also assumed to have significant cumulative impacts.

The Port has approved port-wide air pollution control measures through their CAAP (POLA and POLB, 2010). Implementation of these measures would reduce the health risk impacts from the proposed Project and future projects at the Port. Between 2005 and 2014, the Port of Los Angeles had achieved actual reductions of 85 percent for DPM, 52 percent for NO_X, and 97 percent for SO_X, relative to uncontrolled levels as described in the 2005-2014 Air Quality Report Card (LAHD, 2014). Currently adopted regulations and future rules proposed by CARB and EPA would also further reduce air emissions and associated cumulative health impacts from Port operations. However, because future proposed measures (other than CAAP measures) and rules have not been adopted, they have not been accounted for in the emission calculations or health risk assessment for the proposed Project. Therefore, it is unknown at this time how these future measures would reduce cumulative health risk impacts within the proposed Project area and, therefore, airborne cancer and non-cancer impacts within the proposed Project region must be considered to be cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

Proposed Project construction and operation emissions of TACs would not increase cancer risks above the significance threshold for any receptor type relative to the CEQA baseline (for cancer risk and population cancer burden, the more conservative future CEQA baseline is used) under CEQA. The proposed Project would also not result in increases in non-cancer risk in excess of the significance thresholds. Although proposed Project cancer risk and population cancer burden would be below SCAQMD's Project-level significance thresholds under CEQA, the impacts would be greater than the future CEQA baseline and would combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, the proposed Project would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk and population cancer burden under CEQA. The proposed Project would increase cancer risk at residential and sensitive receptors, and increase population cancer burden above the significance threshold under NEPA. The proposed Project would also result in increases in cancer risk and population cancer burden in excess of the thresholds under NEPA. Thus, TACs from the proposed Project would combine with impacts form other projects and background levels, and would therefore make a cumulatively considerable contribution to a significant cumulative impact for cancer risk and population cancer burden under NEPA.

Although the proposed Project would not increase non-cancer chronic or acute impacts above significance thresholds under CEQA or NEPA, the impacts would be greater than the future CEQA and NEPA baselines and would combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, without mitigation, the proposed Project would make a considerable contribution to cumulative non-cancer chronic or acute health impacts under CEQA or NEPA.

Contribution of the Alternatives

Alternative 1 cancer risk would not exceed the cancer risk significance threshold for any receptor type relative to the CEQA baseline (for cancer risk and population cancer burden, the more conservative future CEQA baseline is used). Alternative 1 would also not result in increases in non-cancer risk in excess of the significance thresholds under CEQA. However, although Alternative 1 cancer risk, population cancer burden, and non-cancer chronic and acute health impact would be below project-level significance thresholds, the impacts would be greater than the future CEQA baseline and would combine with impacts from concurrent related projects and background levels, which would already be cumulatively significant. As a result, Alternative 1 would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk and non-cancer chronic and acute health impacts under CEQA. Alternative 1 would have the same conditions as the NEPA baseline, therefore there would be no TAC-related impacts under NEPA.

Alternative 2 cancer risk would not exceed the cancer risk significance threshold for any receptor type relative to the CEQA baseline (for cancer risk and population cancer burden, the more conservative future CEQA baseline is used). Alternative 2 would also not result in increases in non-cancer risk in excess of the significance thresholds under CEQA. However, although Alternative 2 cancer risk, population cancer burden, and non-cancer chronic and acute health impacts would be below project-level significance thresholds, the impacts would be greater than the future CEQA baseline and would

combine with impacts from concurrent related projects and background levels, which would already be cumulatively significant. As a result, Alternative 2 would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk and non-cancer chronic and acute health impacts under CEQA. Since NEPA requires the evaluation of a No Federal Action Alternative and not a No Project Alternative, no cumulative impact determination under NEPA is made for Alternative 2.

Alternative 3 construction and operation emissions of TACs would not increase cancer risks above the significance threshold for any receptor type relative to the CEQA baseline (for cancer risk and population cancer burden, the more conservative future CEQA baseline is used) under CEQA. Alternative 3 would also not result in increases in non-cancer risk in excess of the significance thresholds. However, although Alternative 3 cancer and non-cancer risks would be below SCAQMD's project-level significance thresholds under CEQA, the impacts could be greater than the future CEQA baseline and could combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, Alternative 3 would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk, population cancer burden, and non-cancer chronic and acute health impacts under CEQA.

Alternative 3 would increase cancer risk at residential receptors, above the significance threshold under NEPA. Although Alternative 3 would not increase population cancer burden and non-cancer chronic and acute health impacts above the threshold, there would be an increase relative to the baseline. Thus, TACs from Alternative 3 would combine with impacts form other related projects and background levels, and would therefore make a cumulatively considerable contribution to a significant cumulative impact for cancer risk, population cancer burden, and non-cancer chronic and acute health impacts under NEPA.

Alternative 4 construction and operation emissions of TACs would not increase cancer risks above the significance threshold for any receptor type relative to the applicable baseline under CEQA (for cancer risk and population cancer burden, the more conservative future CEQA baseline is used), and under NEPA. Alternative 4 would also not result in increases in non-cancer risk in excess of the significance thresholds under CEQA and NEPA. Although Alternative 4 cancer risks and non-cancer chronic and acute health impacts would be below project-level significance thresholds under CEQA and NEPA, the impacts could be greater than the applicable baseline and could combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, Alternative 4 would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk, population cancer burden, and non-cancer chronic and acute health impacts under CEQA and NEPA.

Alternative 5 would result in the same impact determination as the proposed Project under CEQA and NEPA. Alternative 5 construction and operation emissions of TACs would not increase cancer risks above the significance threshold for any receptor type relative to the CEQA baseline. Alternative 5 would also not result in increases in non-cancer risk or population cancer burden in excess of the significance thresholds. However, although proposed Project cancer risk, population cancer burden and non-cancer chronic and acute health impacts would be below project-level significance thresholds under CEQA, the impacts would be greater than the future CEQA baseline and

would combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, the proposed Project would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk, population cancer burden, and non-cancer chronic and acute health impacts under CEQA.

Alternative 5 would increase cancer risk at residential and sensitive receptors, and increase population cancer burden above the significance threshold under NEPA. Thus, TACs from Alternative 5 would combine with impacts from other projects and background levels, and would therefore make a cumulatively considerable contribution to a significant cumulative impact for cancer risk and population cancer burden under NEPA. In addition, although Alternative 5 would not increase non-cancer chronic or acute impacts above significance thresholds under NEPA, the impacts could be greater than the applicable baseline and could combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, this alternative would make a considerable contribution to cumulative non-cancer chronic and acute health impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation would be applied to construction (measures MM AQ-1 through MM AQ-5) and operation (measures MM AQ-6 and MM AQ-7) under the proposed Project and all of the alternatives except for Alternative 2, which does not have a discretionary action. The mitigation would reduce TAC emissions under the proposed Project and the alternatives, and none of the alternatives would have a significant Project-level impacts TAC related impacts under CEQA and NEPA after mitigation. However, although cancer risk, population cancer burden, and non-cancer chronic and acute health impacts would be below project-level significance thresholds under CEQA and NEPA, the impacts could still be greater than the applicable baseline and would combine with impacts from concurrent related projects and background risk levels, which would already be cumulatively significant. As a result, the proposed Project and all alternatives would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk, population cancer burden, and non-cancer chronic and acute health impacts under CEQA and NEPA.

4.2.2.10 Cumulative Impact AQ-8: The proposed Project would not conflict with or obstruct the implementation of an applicable AQMP—Less than Cumulatively Considerable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Concurrent related projects at the Port and surrounding areas (see Table 4-1) would result in significant cumulative impacts if they result in population growth or operational emissions that exceed the assumptions in the 2012 AQMP (SCAQMD, 2013). The related projects would be subject to regional planning efforts and applicable land use plans (such as the General Plan, Community Plans, or the Particulate Measurement Program) or transportation plans such as the Regional Transportation Plan and the Regional Transportation Improvement Program. Since the 2012 AQMP accounts for population projections that were developed by SCAG and accounts for planned land use and transportation infrastructure growth, the related projects would be consistent with the

AQMP. Therefore, the related projects would not result in significant cumulative impacts related to an obstruction of the AQMP.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would produce emissions of nonattainment pollutants. The 2012 AQMP proposes mobile source control measures and clean fuel programs that are designed to bring the SCAB into attainment of the state and national ambient air quality standards. Many of these AQMP control measures are adopted as SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the region. Proposed sources would have to comply with all applicable SCAQMD rules and regulations; therefore, the proposed Project would not conflict with or obstruct implementation of the AQMP.

LAHD regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMPs. Therefore, the attainment demonstration included in the 2012 AQMP accounts for the emissions generated by projected future growth at the Port. Furthermore, LAHD implements the 2010 CAAP Update, which sets goals and implementation strategies that reduce air emissions from Port operations. In some cases, CAAP measures have produced emission reductions that are greater than those forecasted in the 2012 AQMP. Operational activities associated with the proposed Project would comply with the source-specific performance standards identified in the CAAP and therefore would be consistent with emission reduction goals in the 2012 AQMP. As a result, the proposed Project would not make a cumulatively considerable contribution to a cumulative impact in terms of conflicting with or obstructing implementation of an applicable AQMP under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a cumulative impact in terms of conflicting with or obstructing implementation of an applicable AQMP under CEQA or NEPA

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required because the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact.

4.2.3 Biological Resources

4.2.3.1 Scope of Analysis

The geographic region of analysis for biological resources differs by organism groups such as birds, fish, marine mammals, plankton, and benthic invertebrates. The mobility of species in these groups, their population distributions, and the normal movement range for individuals living in an area varies so that effects on biotic communities in one area can affect those communities in other nearby areas.

For terrestrial biological resources (excluding water-associated birds), the geographic region of analysis is limited to those land areas at the Project site and extending throughout the Port Complex, as this is where the majority of biological resources in the vicinity are located. The resources present are common species that are abundant

throughout the region and are adapted to industrial areas in the Harbor. For marine biological resources, excluding marine mammals, the geographical region of analysis for benthic communities, water column communities (plankton and fish), and water-associated birds is the water areas of the Los Angeles/Long Beach Harbor (inner and outer Harbor areas) because the basins, slips, channels, and open waters are hydrologically and ecologically connected. Effects on plankton are more restricted, however, but no distinct boundary can be established so the entire Harbor area is considered in this analysis. For marine mammals, the analysis area includes the Los Angeles-Long Beach Harbor as well as the Pacific Ocean from near Angels Gate out to Catalina Island in order to cover vessel traffic effects.

Special-status species have differing population sizes and dynamics, distributional ranges, breeding locations, and life history characteristics. Because bird species are not year-round residents but migrate to other areas where stresses unrelated to the proposed Project and other projects in the Harbor area can occur, the area for cumulative analysis is limited to the Harbor. Sea turtles are not expected to occur in the Harbor and their presence in the near-shore areas where vessel traffic could affect them is unlikely and unpredictable; consequently, these animals are not considered in the cumulative analysis.

Past, present, and reasonably foreseeable future development that could contribute to significant cumulative impacts on terrestrial resources are those projects that involve land disturbance such as grading, paving, landscaping, construction of roads and buildings, and related noise and traffic impacts. Noise, traffic, and other operational impacts can also be expected to have significant cumulative impacts on terrestrial species. Marine organisms could be affected by activities in the water, such as dredging, pile driving, and vessel traffic. Runoff of pollutants from construction and operations activities on land into Harbor waters via storm drains or sheet runoff also has the potential to affect marine biota, at least near the storm drains.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.3.4.2. These criteria are the same for both the CEQA and NEPA analyses.

4.2.3.2 Cumulative Impact BIO-1: The proposed Project would contribute to a cumulative loss of individuals or habitat of a state or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or the loss of federally listed critical habitat—Less than Cumulatively Considerable

Cumulative Impact BIO-1 represents the potential of the proposed Project along with other cumulative projects to adversely affect state and federally listed endangered, threatened, rare, or protected species, or Species of Special Concern, or to result in the loss of designated critical habitat.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction of past fill projects in the Harbor has reduced the amount of marine surface water present, and thus reduced foraging and resting areas for special-status bird species,

but these projects have also added more land and structures that can be used for perching near the water. In 1979, LAHD began providing nesting habitat for the California least tern at a 15-acre nesting site. The location of this nesting site has changed over time due to Port development activities, and it is now on the southern tip of Pier 400. Elegant Tern, and Caspian Tern are also known to nest at this site, and forage in the area. Shallow water areas to provide foraging habitat for the California least tern and other bird species have been constructed on the east side of Pier 300 and inside the San Pedro breakwater as mitigation for loss of such habitat from past projects. Established roosting areas for birds and the occasional harbor seal occur along the breakwaters, particularly the Middle Breakwater, which is isolated from human access. Impacts to special-status species as a result of marine habitat loss would not be cumulatively significant.

Periodic maintenance dredging (#17) and other projects that could involve dredging such as the Valero (#1), TraPac (#2), YTI (#4), China Shipping (#7), Phillips 66 (#10), Berths 121-131 Yang Ming (#14), APL (#26), and PBF Energy (#35), along with the San Pedro Waterfront Project, which includes the San Pedro Pubic Market (#20), Outer Harbor Cruise Terminal Project (#18) and Relocation of Jankovich Marine Fueling Station (#24), as well as Al Larson Boat Shop Improvement Project (#25), and in the Port Long Beach the Middle Harbor Terminal Redevelopment (#48) and Piers G & J (#49) have the potential to adversely affect California least tern, Elegant Tern, and Caspian Tern foraging during construction activities. These activities have affected or could affect a small portion of the Harbor during any single episode and are of limited duration for each project. Any significant impacts to the California least tern, Elegant Tern, and Caspian Tern could be mitigated through timing of construction activities in areas used for foraging to avoid work when the terns are present. Those projects that are occurring at the same time but that are not near the nesting colony would not be expected to have cumulatively significant effects on the California least tern, Elegant Tern, or Caspian Tern. For these reasons, impacts to these species would not be cumulatively significant. With respect to other special-status bird species (see Tables 3.3-3 and 3.3-4 for a list of threatened, endangered and special-status birds in the Project area), it is not expected that any nesting or foraging habitat or individuals would be lost as a result of backland developments. Because these projects would occur at different locations throughout the Harbor and only some are likely to overlap in time, the birds could use other undisturbed areas in the Harbor, and few individuals would be affected at any one time. Impacts to other special-status bird species would be less than cumulatively significant.

Past, present, and future related projects have increased and will continue to increase vessel traffic. Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale, fin whale, humpback whale, sperm whale, gray whale, minke whale, killer whale, southern sea otter, loggerhead sea turtle, green sea turtle, olive ridley sea turtle, and leatherback sea turtle (NOAA Fisheries and USFWS, 1998a, 1998b, 1998c, 1998d; Stinson, 1984; Carretta et al., 2009; NMFS, 2013). The blue whale, fin whale, humpback whale, sperm whale, gray whale, killer whale, southern sea otter, and all of the sea turtles are all listed as threatened or endangered under the ESA, although the Eastern Pacific gray whale population was delisted in 1994. In Southern California, potential strikes to blue whales are of the most concern due to the migration patterns of blue whales and the established shipping channels. Blue whales normally pass through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds farther north. Along the California coast, there is evidence that despite vessel strikes, blue whale abundance has increased over the past three decades (Calambokidis et al.,

1990; Barlow, 1995; Calambokidis, 1995; Carretta et al., 2009). The increase is too large to be accounted for by population growth alone and is more likely attributed to a shift in distribution. Incidental ship strikes and fisheries interactions are listed by NMFS as the primary threats to the California population. Despite ship strikes, the blue whale population is estimated to be at 97 percent of its carrying capacity, suggesting density dependence (not ship strikes) is the primary factor affecting population size (Monnahan et al., 2015).

Historical data on whale strikes suggest that vessel-speed reduction would substantially reduce the potential for whale strikes because 80 percent of recorded strikes occurred with ships traveling faster than 12 knots. The Port has in place its Vessel Speed Reduction Program (VSRP), which lowers vessel speeds to 12 knots from Point Fermin out to 40 nautical miles from the Port. Port records show more than 90 percent participation in the VSRP, thereby reducing potential for present and future increases in whale strikes due to vessels entering the Harbor. In 2013, the International Maritime Organization (IMO) amended the Traffic Separation Scheme (TSS) in the Santa Barbara Channel and the approach to the Ports of Los Angeles and Long Beach. Traffic Separation Schemes are maritime traffic management systems used to regulate vessel traffic in busy waterways, and to minimize the risk of head-on collisions. The TSS amendment reduced the width of the separation zone from two nautical miles to one nautical mile by shifting the inbound lane shoreward and away from known whale concentrations (NOAA, 2013). The outbound lane remained unchanged. Narrowing the separation zone is expected to reduce co-occurrence of ships and whales while maintaining navigational safety. Nonetheless, operation of many of the past projects and present and future projects would result in increased vessel traffic to and from the Harbor; therefore, the related projects could potentially increase whale mortalities from vessel strikes, which is considered to be a cumulatively considerable and unavoidable significant cumulative impact.

The past projects that have increased vessel traffic have also increased underwater sound in the Harbor and in the ocean from the vessel traffic lanes to Angels Gate and Queens Gate. Ongoing and future terminal upgrade and expansion projects such as TraPac (#2), YTI (#4), China Shipping (#7), Yang Ming (#14), and APL (#26), along with the proposed Project, and Port of Long Beach's Middle Harbor Terminal Redevelopment (#48) and Piers G & J (49) would increase vessel traffic and its associated underwater sound. The increase in frequency of vessel sound events could cause some individual marine mammals to avoid the vessels as they move into, through, and out of the Harbor. The overall increase in the total number of vessels calling in the Port of Los Angeles from the cumulative projects identified in Table 4-1 would increase underwater noise levels. However, the increase is not expected to result in a significant cumulative impact, as a measurable change of 3 dBA would require that the number of vessels would need to double in the Harbor. Therefore, no significant cumulative in-water noise impacts would be expected to occur that could affect sensitive species.

In-water construction activities, and particularly pile driving, would also result in underwater sound pressure waves that could affect marine mammals present in the area. Any seals or sea lions present in the vicinity of Port construction projects would likely avoid the disturbance areas and thus would not be injured. In addition, in-water construction of related projects near the proposed Project, which may include China Shipping (#7), Yang Ming (#14), Berth 164 [Valero] (#1), Berths 167-169 [Shell] (#31), San Pedro Public Market (#20) and PBF Energy (#35) could occur concurrently;

however, concurrent construction activities in the Harbor are unlikely to have an adverse cumulative effect on the marine mammals because ample area exists for any marine mammals that happen to be in the Harbor to move in order to avoid any disturbance. As a consequence, construction of the related projects would not be expected to result in significant cumulative impacts to marine mammals.

Contribution of the Proposed Project (Prior to Mitigation)

Construction of the proposed Project is not likely to result in the loss of individuals or the reduction of existing critical habitat of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. There are no known special-status species or habitats within the 23.5 acres of backlands proposed for development. In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Because in-water construction would occur along Berths 226-232, which are located over two miles away from Pier 400 where the least tern nesting site is, construction would not result in impacts to least tern nesting. In addition, implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, and implementation of standard dredging BMPs via adaptive management of the dredging, would keep these impacts to a less-than-significant level. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from construction activities under CEQA and NEPA.

Sediments would likely be disposed of at LA-2 (LA-2 Ocean Dredged Material Disposal Site), located about five miles south of Point Fermin. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226-232 footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F). Therefore, biological effects due to dredging and disposal would be less than significant. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to dredging and disposal from construction activities under CEQA and NEPA.

Pile driving is anticipated to result in disturbance to marine mammals (particularly harbor seals and sea lions) in the vicinity of pile driving operations. Noise from impact pile driving could cause seals and sea lions to avoid construction areas during pile driving but would not result in the loss of individuals or habitat. However, impacts would potentially be significant on marine mammals resulting from noise associated with pile driving.

Pile driving associated with other projects in the vicinity of the proposed Project, such as for China Shipping (#7), Yang Ming (#14), Valero (#1), Phillips 66 (#10), the San Pedro Public Market (#20), Shell (#31), and PBF Energy (#35) is located in the Main Channel/Turning Basin area, while the APL (#26) and Al Larson Boat Shop Improvement Projects (#25), south of the proposed Project, are expected to occur further away, and there is adequate area in the Harbor for marine mammals to avoid pile driving should it be occurring in multiple locations concurrently. As such, possible concurrent pile driving activities are not expected to be cumulatively significant. Therefore, the

proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile driving.

Increased vessel activity from the proposed Project would result in increased noise levels; however, impacts are not considered cumulatively considerable because this would not lead to the loss of individuals or habitat of sensitive species. The small increase in vessels calling at the Everport Container Terminal relative to the total number of vessels calling in the Port of Los Angeles would not result in a measurable change in overall noise (the number of vessels would need to double to increase sound in the harbor by 3 dBA). Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from over-water noise under CEQA and NEPA.

The increase in vessel traffic associated with the proposed Project as compared with the CEQA baseline would also increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. Although the related projects could result in a significant cumulative impact to marine mammals related to vessel strikes, the proposed Project would not result in a significant project-level impact due to the low probability of a vessel strike. Therefore, operation of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 3 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact related to special-status species (including least terns) or critical habitat, from construction activities, pile driving, and noise from increased vessel traffic under CEQA and NEPA. Alternatives 3 through 5 would include dredging and pile driving (Alternative 3 would include dredging and pile driving at Berths 226-229 only); however, because pile driving associated with other projects in the Harbor is expected to occur more than one mile away, possible concurrent pile driving activities are not expected to be cumulatively significant. In addition, for the same reasons as discussed for the proposed Project, Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact to marine mammals from vessel strikes, under CEQA and NEPA.

Because under Alternative 1 only minor backlands improvements would occur on the existing developed Project site, there would be no loss of individuals or habitat of special-status species (including least terns), and thus no impacts for construction would occur under CEQA. Operations under Alternative 1 would increase vessel traffic. For the same reasons as discussed for the proposed Project, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from noise from increased vessel traffic, and would not make a cumulatively considerable contribution to a significant cumulative impact to marine mammals from vessel strikes, under CEQA. Alternative 1 would result in no impact under NEPA.

Because under Alternative 2 there would be no new construction at the Project site resulting in loss of individuals or habitat of special-status species (including least terns),

no impacts for construction would occur under CEQA. Operations under Alternative 2 would increase vessel traffic. Thus, for the same reasons as discussed for the proposed Project, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from noise from increased vessel traffic, and would not make a cumulatively considerable contribution to a significant cumulative impact to marine mammals from vessel strikes under CEQA. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of mitigation measure MM BIO-1**,** which requires the establishment of safety zones and the monitoring for marine mammals within the zones, would reduce potential cumulative effects from sheet pile driving to marine mammals and ensure that the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile driving. Pile driving is anticipated to result in disturbance to marine mammals (particularly harbor seals and sea lions) in the vicinity of pile driving operations, and impacts would be expected to be significant. However, impacts on marine mammals resulting from noise associated with pile driving would be reduced with implementation of mitigation measure MM BIO-1. This would ensure that marine mammals would be readily able to avoid pile driving areas, and injury to marine mammals from pile driving sounds would not be expected. This would reduce impacts to less-than-significant levels during construction, and no impacts related to pile driving would occur during the operational phase. Residual impacts would be less than significant.

The proposed Project and Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant impact to marine mammal from vessel strikes under CEQA and NEPA due to the low probability of a vessel strike. Alternatives 1 and 2 would not make a cumulatively considerable contribution to a significant cumulative impact related to marine mammal mortalities from vessel strikes under CEQA for the same reason (Alternative 2 is not required to be analyzed under NEPA, and Alternative 1 is the same as the NEPA baseline so there is no incremental difference between them). It should be noted that mitigation measure MM AQ-6, which requires ships calling at the Everport Container Terminal to participate in the VSRP and lower vessel speeds to reduce air quality impacts, would also reduce the potential for vessel strikes under the proposed Project and Alternatives 1 and 3 through 5,

4.2.3.3 Cumulative Impact BIO-2: The proposed Project would not contribute to a cumulatively considerable interference with wildlife movement that may diminish the changes for long term survival of a species—Less than Cumulatively Considerable

Cumulative Impact BIO-2 represents the potential of the proposed Project along with other cumulative projects to interfere with wildlife migration or movement corridors.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

No known terrestrial wildlife or aquatic species migration corridors are present in the Harbor. Migratory birds pass through the Harbor area and some, such as the California

least tern, rest or breed in this area. Past, present, and reasonably foreseeable future related projects in the Harbor would not interfere with movement of these species because the birds are agile and would avoid obstructions caused by equipment and structures. Some species of fish move into and out of the Harbor during different parts of their life cycle or seasonally, but no identifiable corridors for this movement are known. Marine mammals migrate along the coast, and vessel traffic associated with the cumulative projects could interfere with their migration. However, because the area in which the marine mammals can migrate is large and the cargo vessels generally use designated travel lanes, the probability of interference with migrations is low.

Sound pressure waves from pile driving could result in temporary avoidance of the construction areas by fish in the Coastal Pelagics FMP as well as cause their mortality. Few Pacific Groundfish are likely to occur commonly in the Project area, but they could also be affected. Cumulative projects that could include concurrent pile or sheet pile driving include the Valero (#1), Yang Ming (#14), Shell (#31), and potentially other related projects, located in the Main Channel/Turning Basin area, while the APL (#26) and Al Larson Boat Shop Improvement Projects (#25), are south of the Project site, is expected to occur further away. Concurrent construction activities in the Harbor are unlikely to have an adverse cumulative effect on coastal pelagic fish species, because ample area exists in the Harbor for individuals to move to avoid any disturbance and projects in proximity are not expected to occur concurrently. As a consequence, construction of the related projects would not result in a significant cumulative impact to coastal pelagic fishes.

Turbidity and temporary disturbances to coastal pelagic fishes may also occur during in-water construction activities from cumulative related projects including those listed above for pile driving, as well as projects within the Port of Long Beach, such as Middle Harbor (#48), Piers G & J (#49), the Inner Harbor Turning Basin Project (#50), and the Gerald Desmond Bridge (#51), and others including the Schuyler F. Heim Bridge (#55), and Cerritos Channel Bridge (#57). These disturbances in the Harbor occur at specific locations that are scattered in space and time. Any concurrent construction activities at these sites would be short in duration and potential effects from dredging and localized construction activities would diminish rapidly with distance from in-water activity.

Thus, construction and operation of related cumulative projects would not be expected to increase impacts to managed fish species and would not be expected to have a significant cumulative effect related to wildlife movement or migration corridors.

Contribution of the Proposed Project (Prior to Mitigation)

There are no known terrestrial wildlife migration corridors at the Project site. The only migratory species in the Harbor are birds. California least tern, Elegant Tern, and Caspian Tern are migratory bird species that nest at Pier 400; construction of the proposed Project would not interfere with the migration of these species. Movement to and from foraging areas in the Harbor also would not be affected by proposed Project construction activities because the work would be in a small portion of the harbor area where the birds occur, and the birds could easily fly around or over the work. Further, proposed Project-related construction vessel traffic to and from the Harbor would not interfere with whale migrations along the coast, as these vessels would represent a small proportion of the total Port-related commercial traffic in the area, and each vessel would have a low probability of encountering migrating whales during transit through coastal

waters because these animals are generally sparsely distributed offshore and rarely enter the Port Complex (LAHD and USACE, 2007). Therefore, construction of the proposed Project would not affect any migration, including aerial and marine mammal movement or migration corridors in the Harbor or along the coast.

Coastal Pelagic species are abundant in the Harbor and due to the limited area of potential effect, the numbers of fish exposed to harmful pressure waves would represent a very small proportion of the number of fish in the Port Complex at any given time and would not substantively affect fish populations covered by a Fishery Management Plan (FMP). In addition, there would be no physical barriers to movement, and the baseline conditions for fish and wildlife access would be essentially unchanged. Therefore, this would not be considered a substantial disruption.

Turbidity and effects related to possible resuspension of contaminants during dredging would be temporary and localized. Implementation of required water quality monitoring during dredging (according to the requirements of the LARWQCB), and standard dredging BMPs via adaptive management of the dredging, would result in less-than-significant impacts. Water quality conditions would be expected to quickly return to baseline once dredging and in-water construction activities are completed.

No barriers to wildlife passage would result from operation of the proposed Project. As discussed above, the only defined migratory species in the Harbor are birds, and operation of the proposed Project would not interfere with the migration of these species. Five 100-foot gauge wharf cranes would be added along the existing crane rail at Berths 226–229. Because there are already cranes at the terminal and throughout the Port Complex, and because birds are adept at avoiding obstructions, the addition of five cranes is not anticipated to impede bird movements. Movement to and from foraging areas in the Harbor also would not be affected by operation of the proposed Project. Although the proposed Project would increase vessel calls to the terminal, the transiting vessels would not represent barriers to wildlife passage, and would not interfere with wildlife movement, including fish movement.

Consequently, construction and operation of the proposed Project would not be expected to make a cumulatively considerable contribution to a significant cumulative impact on wildlife movement or migration corridors under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to wildlife migration or movement corridors.

No wildlife corridors exist on or near the project site, and because under Alternative 1 there would be only backlands improvements, there would be no interference with wildlife movement or migration corridors, and no impacts for construction would occur under CEQA. Continuing operations under Alternative 1 would result in an increase in vessel calls, but the vessels would not interfere with wildlife movement or migration (including fish movement), and no impacts for operations would occur under CEQA. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to wildlife migration or movement corridors. Alternative 1 would result in no impact under NEPA.

No wildlife corridors exist on or near the Project site, and because under Alternative 2 there would be no new construction at the Project site resulting in interference with wildlife movement or migration corridors, no impacts for construction would occur under CEQA. Continuing operations under Alternative 2 would result in an increase in vessel calls, but the vessels would not introduce any new structures at the Project site, and thus no interference with wildlife movement or migration (including fish movement) would occur, and no impacts for operations would occur under CEQA. Therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to wildlife migration or movement corridors. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Pile driving would not make a cumulative considerable contribution to a significant cumulative impact to fishes because they would likely leave the area and barriers to their movement would not be introduced. In addition, terminal operations would not impose barriers to wildlife movement, including fish movements. Therefore, residual impacts would be less than significant.

Turbidity and effects related to possible resuspension of contaminants during dredging would be temporary and localized. Water quality conditions would be expected to quickly return to baseline conditions once dredging and in-water construction activities are completed. Implementation of required water quality monitoring during dredging (according to the requirements of the LARWQCB), and standard dredging BMPs via adaptive management of the dredging, would result in less-than-significant impacts, and ensure that the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.3.4 Cumulative Impact BIO-3: The proposed Project would contribute to a cumulatively considerable disruption of local biological communities (e.g., from construction impacts or the introduction of noise, light, or invasive species)—Cumulatively Considerable and Unavoidable

Cumulative Impact BIO-3 represents the potential of the proposed Project along with other projects to cause a cumulatively substantial disruption of local biological communities (i.e., from the introduction of noise, light, or invasive species).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Dredging and Wharf Work

Construction of past projects in the Harbor has involved in-water disturbances such as dredging and wharf construction that removed surface layers of soft-bottom habitat, and temporarily removed or permanently added hard substrate habitat (i.e., piles and rocky dikes). These disturbances altered the benthic habitats present at the location of the specific projects, but effects on benthic communities were localized and of short duration,

as benthic and invertebrate communities are shown to recolonize quickly following dredging. Because these activities affected a small portion of the Harbor during any single episode, and recovery has occurred or is in progress, biological communities in the Harbor have not been substantially degraded. Similar construction activities and impacts (i.e., wharf construction/reconstruction and dredging) would occur for these cumulative related projects that are currently under way and for some of those that would be constructed in the future, including the nearby Valero (#1), Phillips 66 (#10), Yang Ming (#14), Maintenance Dredging (#17), San Pedro Public Market (#20), Shell (#31), PBF Energy (#35), and potentially other related projects located in the Main Channel/Turning Basin area, and the APL (#26) and Al Larson Boat Shop Improvement Projects (#25) south of the proposed Project, as well as those in the Port of Long Beach (#48 and #49). Because recolonization of dredged areas and new riprap and piles begins immediately, and within a short time provides a food source for other species such as fish, multiple projects that are spread over time and space within the Harbor would not be expected to substantially disrupt benthic communities. Construction disturbances caused by the cumulative projects at specific locations in the water and at different times can cause fish and marine mammals to avoid the work area but are not expected to substantially alter the distribution and abundance of these organisms in the Harbor and would not substantially disrupt biological communities. Turbidity results from in-water construction activities occurring in the immediate vicinity of the work and lasts for short durations after the activities that disturb bottom sediments have been completed. Effects on marine biota are thus localized to relatively small areas of the Harbor and are of limited duration for each project. Thus, those projects that are occurring at the same time but that are not nearby would not be expected to have additive effects.

The invasive green alga *Caulerpa* has the potential to spread by fragmentation. Prior to in-water work (including dredging), underwater surveys for *Caulerpa* have been (and would be) conducted to ensure that no *Caulerpa* is present at the Project site. In the unlikely event that *Caulerpa* is detected during preconstruction surveys, an eradication program would be implemented per the requirements of the *Caulerpa* Control Protocol (NMFS and CDFG, 2008). Construction would commence only after the area is certified to be free of this invasive species. Since 2008, *Caulerpa* surveys have been conducted in the harbor as a standard procedure prior to sediment-disturbing activities, and no *Caulerpa* has been found. Considering the *Caulerpa* survey requirement and absence of *Caulerpa* to date, and with implementation of *Caulerpa* protocols, the potential for cumulative underwater construction activities to spread this species is unlikely.

Furthermore, based on biological baseline studies described in Section 3.3, the benthic marine resources of the Harbor have not declined during Port development activities occurring since the late 1970s.

While major dredging and filling activities within the Harbor can disturb benthic communities, recolonization of disturbed marine environments begins rapidly and is characterized by high production rates of a few colonizing species. However, establishment of a climax biological community could take several years.

Based on the above, dredging, wharf construction, and other in-water construction of the past, present, and reasonably foreseeable future projects have not and would not be expected to result in significant cumulative impacts to the benthic community.

Backland Construction and Operations

Runoff from construction activities on land has reached Harbor waters at some locations during past project construction, particularly for projects implemented prior to the 1970s when environmental regulations were promulgated. The past projects included Pier 300, Pier 400, Pier J, and the remaining terminal land areas within the Los Angeles-Long Beach Harbor. Runoff also has the potential to occur during present and future projects (this includes all projects in Table 4-1 because all drainage from the area that contains the listed cumulative projects is ultimately to the Harbor). Construction runoff would only occur during construction activities, so projects that are not concurrent would not have cumulative effects. Construction runoff would add to ongoing runoff from operation of existing projects in the Harbor at specific project locations and only during construction activities. For past, present, and future projects, the duration and location of such runoff would vary over time. Measures such as berms, silt curtains, and sedimentation basins are used to prevent or minimize runoff from construction, and this keeps the concentration of pollutants below thresholds that could measurably affect marine biota. Runoff from past construction projects (i.e., turbidity and any pollutants) dissipated shortly after construction was completed or diminished as solids settled to the bottom sediments.

Operational activities within upland areas of the Port Complex from existing and related projects contribute to pollutants in runoff. However, water quality has generally improved, due to implementation of stormwater and runoff BMPs, as well as permit compliance. Further, the diversity and health of marine biological resources have improved over time.

Effects of runoff from construction activities and operations would not substantially disrupt local biological communities in the Harbor, and as a consequence, past, present, and reasonably foreseeable future projects would not be expected to result in significant cumulative biological resources impacts related to runoff.

Vessel Traffic

Cumulative marine terminal projects (i.e., Valero [#1], TraPac [#2], YTI [#4], China Shipping [#7], Phillips 66 [#10], Yang Ming [#14], APL [#26], Shell [#31], PBF Energy [#35], Middle Harbor Terminal Redevelopment [#48], and Piers G & J [#49]), and other related projects that involve vessel transport of cargo into and out of the Harbor have increased vessel traffic in the past and would continue to do so in the future. These vessels have introduced invasive exotic species into the Harbor through ballast water discharges and via their hulls. Ballast water discharges are now regulated so that the potential for introduction of invasive exotic species by this route has been greatly reduced. The potential for introduction of invasive exotic species via vessel hulls has remained about the same, and use of antifouling paints and periodic cleaning of hulls to minimize frictional drag from growth of organisms keeps this source low. While invasive exotic species are present in the Harbor, there is no evidence that these species have disrupted the biological communities in the Harbor. Biological studies conducted in the Harbor continue to show the existence of diverse and abundant biological communities. However, absent the ability to completely eliminate the introduction of new species through ballast water or on vessel hulls, it is possible that ecologically disruptive invasive exotic species could become established in the Harbor over time, even with these control measures. As a consequence, past, present, and reasonably foreseeable

future projects could result in significant cumulative biological resource impacts related to the introduction of invasive exotic species to Harbor waters.

In addition, there is the possibility, although remote, of accidental spills from one or more vessels that conceivably could release enough fuel into ocean waters to result in impacts to biological resources. However, in the unlikely event of a spill, it would be subject to regulations regarding containment, clean-up, and remediation. Therefore, cumulative impacts would not be considered to be significant.

Contribution of the Proposed Project (Prior to Mitigation)

Dredging and Wharf Work

The proposed Project would result in dredge work and installation of in-water structures (sheet and king piles) at Berths 226–236 that would disturb the benthic community, but the community would begin recolonization soon after in-water construction is completed. Resuspension of contaminants of concern during dredging could adversely affect aquatic organisms if contaminants of concern are present in sufficient dissolved concentrations; however, this would be limited in duration and would be confined to the vicinity where the dredging is taking place. Additionally, water quality monitoring and construction BMPs, including the potential use of silt curtains, would reduce the potential for these effects. As a result, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to the benthic community under CEQA and NEPA.

Construction activities in the study area, particularly pile driving, could cause short-term impacts on individuals (i.e., marine mammals and fishes, including those with designated EFH) in the immediate vicinity of pile driving or other construction activities (including sources of noise and light). The disturbances would be temporary and limited to relatively small areas in the East Basin Channel adjacent to the Project site. Also, the distance between pile driving activities associated with the installation of piles at Berths 226–236 and pile driving activities associated with other projects in the Harbor is expected to be greater than one mile; therefore, no substantial disruption of biological communities would be expected to result from proposed Project construction. Considering the *Caulerpa* survey requirement and absence of *Caulerpa* in the Harbor to date, and the *Caulerpa* protocols, the potential for proposed underwater construction activities to spread this species at the Project site is unlikely. As a result, the proposed Project construction activities would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological community under CEQA and NEPA.

Backland Construction and Operations

Runoff from temporary disturbance areas on land during construction of proposed Project backland facilities would add to the cumulative amount of construction runoff from all other projects in the Harbor that are being constructed concurrently with the proposed Project. Construction activities are closely regulated by state and local agencies, and runoff of pollutants in quantities that could adversely affect marine biota is not likely to occur. Furthermore, runoff from the proposed Project and most of the cumulative projects would not occur simultaneously but rather would be events scattered over time, so that total runoff to Harbor waters would be dispersed, in both frequency and location. Existing runoff and storm drain discharge controls, as well as conditions of all proposed

Project-specific permits, would be implemented to control runoff during operations of the proposed Project. Thus, construction and operation of the proposed Project would not contribute to cumulatively considerable effects on biological communities under CEQA or NEPA, because runoff control measures would be implemented and maintained as required in proposed Project permits and contract specifications.

Vessel Traffic

The increase in vessel traffic in the Harbor caused by the proposed Project would add to the cumulative potential for introduction of exotic species. Many exotic species have already been introduced into the Harbor, and many of these introductions occurred prior to implementation of ballast water regulations. These regulations reduce the potential for introduction of non-native species. However, cumulative effects related to the introduction of non-native species have the potential to be cumulatively significant if the introduced species is ecologically harmful, and as the proposed Project will increase vessel traffic, it could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA and NEPA.

In addition, there is a remote possibility of an accidental spill from vessels during proposed Project operation. The terminal operator is required to specifically prepare a Spill Response Plan for inclusion in the required Spill Prevention, Control, and Countermeasure/Oil Spill Contingency Plan (SPCC/OSCP) in the event of a vessel accident that results in a fuel spill. Additionally, should this occur, the spill would be subject to regulations governing containment, clean-up, and remediation, and thus would not make a cumulatively considerable contribution to a potentially significant impact under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, in-water construction activities or runoff from construction and operation of Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological communities under CEQA and NEPA. Similarly, upland construction of Alternatives 3 through 5 and the potential for an accidental vessel spill would not make a cumulatively considerable contribution to a significant cumulative impact on biological communities under CEQA or NEPA. However, Alternatives 3 through 5 could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA and NEPA.

Because under Alternative 1 there would be no dredging or in-water construction, and there are no sensitive biological communities present on the 23.5 acres of backlands proposed for development, there would be no disruption of local biological communities related to construction, and no impacts related to construction would occur under CEQA. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological communities under CEQA related to construction. Further, though there would be an increase of vessel calls to the site under Alternative 1, for the same reasons as described for the proposed Project, the potential for an accidental vessel spill under Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact on biological communities under CEQA. Also, for the same reasons as described for the proposed Project, Alternative 1 could make a cumulatively considerable contribution to a significant

cumulative impact related to the introduction of non-native species under CEQA. Alternative 1 would result in no impact under NEPA.

There would be no construction at the Project site under Alternative 2, therefore, no impacts for construction would occur under CEQA. Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological communities under CEQA related to construction. Further, although there would be an increase of vessel calls to the site under Alternative 2, for the same reasons as described for the proposed Project, the potential for an accidental vessel spill under Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact on biological communities under CEQA. Also, for the same reasons as described for the proposed Project, Alternative 2 could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

The proposed Project and alternatives would not be expected to make a cumulatively considerable contribution to a significant impact to the biological community under CEQA or NEPA from in-water construction activities, runoff from construction and operation, or accidental vessel spill.

There is no feasible mitigation beyond legal requirements is currently available to entirely prevent introduction of invasive exotic species via vessel hulls or ballast water. As such, there is no way to prevent the cumulatively considerable contribution to the significant cumulative impacts to biological resources related to the potential introduction of invasive exotic species by the proposed Project and Alternatives 3 through 5 under CEQA and NEPA, and Alternatives 1 and 2 under CEQA. New technologies are being explored and, if methods become available in the future, they would be implemented as required at that time. Consequently, the proposed Project and Alternatives 3 through 5 would make a cumulatively considerable and unavoidable contribution to a significant impact to biological resources under CEQA and NEPA, and Alternatives 1 and 2 would make a cumulatively considerable contribution to a significant impact to biological resources under CEQA. Alternative 1 would result in no impact under NEPA and Alternative 2 is not applicable to NEPA.

4.2.3.5 Cumulative Impact BIO-4: The proposed Project would not contribute to a cumulatively considerable permanent loss of marine habitat—No Cumulatively Considerable Impact

Cumulative Impact BIO-4 represents the potential of the proposed Project along with other cumulative projects to result in a permanent loss of marine habitat.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction of past fill projects in the Harbor has reduced the amount of marine habitat present, related projects with recently completed fill include TraPac (#2), China Shipping (#7), and Middle Harbor (#48). Other related projects that could require new fill or reconfiguration that affects marine habitat include the Yang Ming (#14), Al Larson Boat

Shop (#25), and potentially other related projects. Because these projects would occur at different developed locations throughout the Port Complex, and ample marine habitat existing in the Port Complex, impacts to marine habitat from related projects would be less than cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.3, no loss of marine habitat would occur because the proposed Project would not result in fill being discharged into the marine environment that could eliminate marine habitat functions. The sheet and king piles that would be added to the water column would protrude slightly above the seafloor and would provide hard substrate usable as habitat by marine organisms. As there would be no proposed Project-specific impact, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to permanent loss of marine habitat under CEQA and NEPA.

Contribution of the Alternatives

As described in Section 3.3, no loss of marine habitat would occur under any of the alternatives, as none would require or result in fill being discharged into the marine environment that could eliminate marine habitat functions. Therefore, Alternatives 1-5 would not make a cumulatively considerable contribution to a significant cumulative impact related to permanent loss of marine habitat under CEQA and NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any of the Alternatives would not make a cumulatively considerable contribution to a significant impact to marine habitant, and no mitigation is required.

4.2.4 Cultural Resources

4.2.4.1 Scope of Analysis

The geographic region of analysis for cumulative impacts on archaeological, ethnographic, architectural, and paleontological resources related to Port projects consists of the areas at the Port and in the immediate vicinity within natural landforms (i.e., excluding modern Port in-fill development). Under CEQA and NEPA, it also includes areas in water where there may be submerged prehistoric remains and/or where there is evidence that historical maritime activity could have occurred. Thus, past, present, planned and foreseeable future development that would contribute to cumulative impacts on archaeological and ethnographic resources under CEQA and NEPA includes projects that would have the potential for ground disturbance in this region of analysis. Those projects on land that have the potential to modify and/or demolish structures over 50 years of age have the potential under CEQA and NEPA to contribute to cumulative impacts on historical architectural resources. Projects that involve grading of intact, natural landforms (i.e., not imported/modern fill material) have the potential under CEQA to contribute to cumulative impacts on paleontological resources.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.4.3.2. The criteria for CR-1, CR-2, and CR-3 apply to both the CEQA and NEPA analysis.

4.2.4.2 Cumulative Impact CR-1: The proposed Project would have the potential to make a cumulatively considerable contribution to a significant cumulative impact on built environment historical resources—Cumulatively Considerable Impact

Cumulative Impact CR-1 represents the potential of the proposed Project along with related cumulative projects to have a substantial adverse change in the significance of an historical resource or a significant impact on an historical resource by altering, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects within urban settings including the proposed Project area have involved demolition of architectural structures (some that could be now considered historic had they not been demolished), most often without the benefit of their recordation (photographs and professional drawings) beforehand. Though each structure over 50 years old is not necessarily unique, historic buildings and some buildings that were demolished before meeting the definition of historic could have contributed to understanding events that have made a significant contribution to the broad patterns of history, may have been associated with the lives of persons significant in the past, and/or may have been architecturally distinctive. Their demolition without previous recordation may have reduced the ability to fully describe the region's heritage.

Proposed present and future projects requiring removal of historical architectural resources within the Port Complex (i.e., demolition of structures over 50 years of age that are eligible for listing in the CRHR or NRHP) include the Al Larson Boat Shop (#25), which includes buildings eligible for listing in the CRHR and may qualify for designation as City of Los Angeles Historic-Cultural Monuments (HCM).

Cumulative impacts associated with past, present, and reasonably foreseeable future projects regarding historical architectural resources could be cumulatively significant if they include the removal of significant or potentially significant historical architectural resources.

Contribution of the Proposed Project

The Vincent Thomas Bridge, which was previously identified as eligible for listing in the NRHP and the CRHR, spans the northern portion of the Project site, and several of the concrete support columns at the eastern end of the bridge are within the terminal boundaries. However, the proposed Project would not directly or indirectly alter the distinctive physical or historical characteristics of the Vincent Thomas Bridge, nor would it alter its integrity of location, design, materials, workmanship, feeling, or association.

As discussed in Section 3.4.4.3, (Impact CR-1) development of the 22-acre backlands expansion area would require the demolition of one potentially historic building, the former Canner's Steam Company Plant. The former Canner's Steam Company Plant has been found to be eligible for listing in the CRHR and eligible for local designation as a HCM, but not the NRHP, and its demolition represents a significant Project-level impact to historic resources under CEQA.

Although demolition of historic structures in the redevelopment area of the Project site is a Project-specific impact under CEQA, there are other historic structures within the Project vicinity that have historical significance (i.e., locally significant for association with the development of the Port of Los Angeles). As a result, the contribution of the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under Cumulative Impact CR-1 under CEQA.

Expansion of the 22-acre backlands area would occur absent a DA permit, and is therefore included in the NEPA baseline. Although there are CRHP eligible historic resources located within the 22-acre expansion area, because the development activities associated with this expansion is included in both the NEPA baseline and the proposed Project, there would be no impact to the historic resources under NEPA. Therefore, the proposed Project would not affect any historic resources under NEPA, and would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA. In addition, the 22-acre expansion area is located outside of the USACE permit area/APE, and is beyond the USACE's federal control and responsibility.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1, 3, and 5, which also include the demolition of the former Canner's Steam Company Plant, would make a cumulatively considerable contribution to a significant cumulative impact on built environment resources under CEQA. Alternatives 2 and 4, which would not result in the demolition of the former Canner's Steam Company Plant, would not make a cumulatively considerable contribution to a significant cumulative impact on built environment resources under CEQA. Alternatives 2 through 5 would result in no impact under NEPA. Alternative 1 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

As described in Section 3.4, Cultural Resources, implementation of mitigation measure MM CR-1 (historic resources recordation) would reduce the Project-level impacts on a historic structure under CEQA, but not to a level of less than significant. No additional mitigation is available that would reduce impacts to less than significant on the Project-level under CEQA and as such, the cumulatively considerable contribution of the proposed Project would remain. The proposed Project would result in no impact under NEPA and no mitigation measures are required.

4.2.4.3 Cumulative Impact CR-2: The proposed Project would not make a cumulatively considerable contribution to an adverse change in the significance of an archaeological or ethnographic resources—Less than Cumulatively Considerable

Cumulative Impact CR-2 represents the potential of the proposed Project along with other cumulative projects to result in an adverse effect by altering, directly or indirectly, any of the characteristics of a known or unknown prehistoric and/or historic archaeological or ethnographic resources that that is found to be important under the criteria of CEQA (under CEQA) or qualify the property for inclusion in the NRHP (under NEPA).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Archaeologists estimate that past and present projects within urban areas including the proposed Project vicinity have destroyed over 80 percent of all prehistoric sites without proper assessment and systematic collection of information beforehand. As prehistoric sites are non-renewable resources, the direct and indirect impacts of these actions are cumulatively significant. Such projects have eliminated the ability to study sites that may have been likely to yield information important in prehistory. In other words, the vast majority of the prehistoric record has already been lost.

Construction activities (i.e., excavation, dredging, and land filling) associated with past, present and future Port projects in the vicinity of the Project site including the Valero (#1), YTI Container Terminal [#4], Phillips 66 (#10), Shell (#31) Fisherman's Pride Fish Processing Facility (#34), and PBF Energy (#35) projects would potentially require excavation on their respective project sites. These activities, however, would occur largely on imported fill with a very low potential for the presence of archaeological or ethnographic resources. In addition, none of the related projects would result in excavation on the site of the former Japanese Fishing Village. Therefore, the related projects would not affect prehistoric or historic archaeological or ethnographic resources, and significant cumulative impacts to archaeological resources are not anticipated.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.4.4.3 (Impact CR-2), areas of Rattlesnake Island underlie the northern portions of the Project site (Figure 3.4-4). However, Terminal Island has undergone extensive disturbance and fill since the late 1800s (Figure 3.4-2 shows the fill areas within the Port), and although the original Rattlesnake Island underlays the northern portions of the Project site, the underlying soils are disturbed and hence installation of infrastructure within the existing terminal is not likely to encounter archaeological or ethnographic resources, or cause adverse impacts to such resources.

One historic period archaeological site has been identified in the 22-acre backlands expansion area, associated with the past Japanese Fishing Village. Excavation within the 22-acre backlands expansion would likely damage archaeological resources associated with the former Japanese Fishing Village. However, while this would be a significant Project-level impact, no other related projects would result in excavation of the former Japanese Fishing Village and, as described above, significant cumulative impacts would not occur. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative under CEQA.

The site of the Japanese Fishing Village is located within the 22-acre backland expansion area, which would be developed absent a DA permit, and is therefore included in the NEPA baseline. Although there are archaeological resources located within the 22-acre expansion area, because the development activities associated with this expansion is included in both the NEPA baseline and the proposed Project, there would be no impact to the archaeological resources under NEPA. Therefore, the proposed Project would not affect any archeological resources under NEPA, and would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA. In addition, the 22-acre expansion area is located outside of the USACE permit area/APE, and is beyond the USACE's federal control and responsibility.

Contribution of the Alternatives

No development of the 22-acre backlands site (where archaeological resources associated with the former Japanese Fishing Village are located) would occur under Alternatives 2 and 4, and thus, these alternatives would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under CEQA. As described above, none of the related projects would result in physical changes to the site of the former Japanese Fishing Village, and therefore, significant cumulative impacts to archaeological resources would not occur under CEQA. Like the proposed Project, Alternatives 1, 3 and 5 would include development of the 22-acre backlands, and would therefore cause significant project-level impacts to archaeological resources. However, since the project-level impact to archaeological resources would not contribute to a significant cumulative impact, Alternatives 1, 3, and 5 would not make a cumulative considerable contribution to a significant cumulative impact to archaeological resources under CEQA.

The site of the Japanese Fishing Village is located within the 22-acre backland expansion area, which would be developed absent a DA permit, and is therefore included in the NEPA baseline. Although there are archaeological resources located within the 22-acre expansion area, because the development activities associated with this expansion is included in both the NEPA baseline and Alternatives 1, 3, and 5, there would be no impact to the archaeological resources under NEPA from these alternatives. Alternative 4 does not include development of the 22-acre expansion area. Therefore, Alternatives 1, 3, 4, and 5 would not affect any archeological resources under NEPA, and would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA. Alternative 2 is not required to be analyzed under NEPA. In addition, the 22-acre expansion area is located outside of the USACE permit area/APE, and is beyond the USACE's federal control and responsibility.

Mitigation Measures and Residual Cumulative Impacts

Although excavation within the existing terminal for infrastructure installation is not likely to encounter or adversely affect archaeological resources, standard condition (SC) of approval SC CR-1 would be applied to the implementation of the proposed Project. SC CR-1 provides that work shall be immediately stopped and relocated from the area in the unlikely event that potentially significant, intact archaeological or ethnographic resources are encountered during construction.

As described in Section 3.4, Cultural Resources, implementation of mitigation measures MM CR-2 (Phase I Cultural Resource Investigation at the 22-acre backlands site) and MM CR-3 (Pre-construction Worker Training) would reduce the impacts to the Project's historic archaeological resources under CEQA. These mitigation measures reduce Project level impacts but not to a level of less than significant. No additional mitigation is available that would reduce impacts to less than significant at a Project-level under CEQA for the proposed Project and Alternatives 1, 3, and 5. However, the impacts to archaeological resources are Project-level impacts and no other related projects would combine to result in a significant cumulative impact to archaeological resources associated with the former Japanese Fishing Village. Therefore, the proposed Project and Alternatives 1, 3, and 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Alternatives 2 and 4 would not result in impacts to archaeological resources and would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA.

There are no cumulative impacts on archaeological or ethnographic resources associated with the proposed Project or alternatives under NEPA; therefore, there would be no cumulative residual effect under NEPA.

4.2.4.4 Cumulative Impact CR-3: The proposed Project would have no potential to contribute to a cumulatively considerable loss of, or loss of access to a significant paleontological resource—Less than Cumulatively Considerable

Cumulative Impact CR-3 represents the potential of the proposed Project along with other cumulative projects to result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The number and percentage of significant paleontological resources in the Port area destroyed by past and present projects is difficult to determine. Geological formations in which important terrestrial vertebrate fossils may be found, however, have been substantially disturbed by urban development without systematic analysis by a professional paleontologist. There is the potential for unusual (i.e., because of their age, size, and/or condition) or previously unrecorded fossil species to be encountered within an urban project area. It is reasonable to expect that past excavation and construction projects have resulted in the destruction of some paleontological resources. The area and landform in the vicinity of the Project site has undergone substantial changes over time (see Figure 3.4-2 in Section 3.4, Cultural Resources), and Terminal Island is now largely underlain with man-made fill and is paved or highly disturbed.

Construction activities in the immediate vicinity of the Project site associated with present and future Port projects, including YTI (#4) and PBF Energy (#35) would potentially require excavation. Construction activities associated with these projects would occur primarily on man-made and highly disturbed land that have a very low likelihood of containing natural fossil deposits, or in areas of historical estuaries containing sediments dating from recent geologic time (i.e., the last 10,000 years), after the time period when fossil materials would develop. Therefore, these projects would be located within areas that do not encompass potentially significant paleontological resources. Although much of the area has been previously disturbed, there is the potential for areas on or adjacent to natural landforms and other related Port projects on the mainland, including the related projects in San Pedro and Wilmington, to disturb unknown paleontological resources. The past, present, and foreseeable future projects on the mainland may result in the destruction of paleontological resources, which could be cumulatively significant.

Contribution of the Proposed Project

Cumulative Impact CR-3 represents the potential of the proposed Project along with other cumulative projects to result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.

As discussed in Section 3.4.4.3, no paleontological resources are known to exist at the Project site or immediate vicinity. The Project site is located on Terminal Island, which was created by filling over and extending Rattlesnake Island with dredge material. The soils beneath the existing terminal have been disturbed and excavation within the existing terminal that encounters subsurface native soil is not expected to occur. The 22-acre and the 1.5-acre expansion areas were created by placement of imported fill material, and are unlikely to contain paleontological resources of regional or statewide significance.

Consequently, there would be an extremely low potential for paleontological resources to be found during construction, and impacts would not occur as a result of implementing the proposed Project. Therefore, the contribution of the proposed Project would not be cumulatively considerable when combined with past, present, and reasonably foreseeable future projects under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. The proposed Project and Alternatives 1, and 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Although proposed Project-level impacts are not anticipated, standard condition of approval SC CR-2 requires that work be immediately stopped and relocated from the area in the unlikely event that a paleontological resource is encountered during construction. Prior to the implementation of SC CR-2, impacts would be less than significant; however, SC CR-2 was added in the remote chance that previously unknown paleontological resources are encountered during construction. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

4.2.5 Greenhouse Gas Emissions

Scientific evidence indicates a trend of warming global surface temperatures over the past century due at least partly to the generation of greenhouse gas (GHG) emissions from human activities as discussed in Section 3.5, Greenhouse Gas Emissions. Some observed changes include shrinking glaciers, thawing permafrost, and shifts in plant and animal ranges. Credible predictions of long-term impacts from increasing GHG levels in the atmosphere include sea level rise, changes to weather patterns, changes to local and regional ecosystems including the potential loss of species, and significant reductions in winter snow packs. These and other effects could have environmental, economic, and social consequences on a global scale. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. According to the IPCC's Climate Change 2014 Synthesis Report (IPCC, 2014), global anthropogenic emissions of GHGs in 2010 were approximately 49.0 gigatonnes of carbon dioxide equivalent (CO_2e). In California alone, CO_2e emissions totaled approximately 441.5 million metric tons or 0.5 gigatonnes in 2014 (CARB, 2016).

4.2.5.1 Cumulative Impact GHG-1: The proposed Project would generate GHG that would exceed the SCAQMD threshold—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects in the area (Table 4-1) have generated and will continue to generate GHGs from the combustion of fossil fuels and the use of coatings, solvents, refrigerants, and other products. Current and future projects will incorporate a variety of GHG reduction measures in response to federal, state, and local mandates and initiatives, and these measures are expected to reduce GHG emissions from future projects. However, because of the long-lived nature of GHGs in the atmosphere and the global nature of GHG emissions impacts, no specific quantitative level of GHG emissions from related projects in the region or state-wide has been identified below which no impacts would occur. It is therefore conservatively assumed that related projects represent a significant cumulative impact.

Contribution of the Proposed Project (Prior to Mitigation)

The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is to determine whether a project's GHG emissions, which are at a micro-scale relative to global emissions, make a cumulatively considerable incremental contribution to a macro-scale impact. SCAQMD developed a project-level significance threshold for GHGs. For the purposes of this cumulative discussion, it is conservatively assumed that an exceedance of the project-level threshold could result in a cumulatively considerable contribution to the overall GHG burden.

Construction and operation impacts of the proposed Project would exceed SCAQMD's significance threshold in all analysis years. Proposed Project impacts would combine with impacts from related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from proposed Project construction and operation would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG and global climate change under CEQA.

USACE has not adopted the SCAQMD significance threshold and has established the position that no science-based GHG significance thresholds exist, nor has the federal government or the state adopted any by regulation. In the absence of an adopted or science-based GHG standard, in compliance with the Council on Environmental Quality (CEQ) and USACE NEPA implementing regulations, a significance determination regarding GHG emissions is not made under NEPA.

Contribution of the Alternatives

Alternatives 1 through 5 GHG emissions would exceed the SCAQMD GHG significance threshold under CEQA. Alternative 1 through 5 impacts would combine with impacts from related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from Alternatives 1 through 5 would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG

and global climate change under CEQA. A significance determination regarding GHG emissions is not made under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, proposed Project and Alternatives 1 and 3 through 5 impacts would be reduced but would continue to exceed the significance threshold under CEQA. Mitigation is not required under Alternative 2 because there would be no discretionary action under CEQA.

Proposed Project and alternatives impacts would combine with impacts from related projects, which would already be cumulatively significant. As a result, after mitigation, impacts from the proposed Project and alternatives would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG and global climate change under CEQA. A significance determination regarding GHG emissions is not made under NEPA.

Please refer to Section 3.5.5.4 for the informational discussion related to CEQA Guidelines Checklist question GHG-2.

4.2.6 Ground Transportation

4.2.6.1 Scope of Analysis

The transportation environmental setting for the cumulative ground transportation analysis includes those streets and intersections that would be used by both automobile and truck traffic to gain access to and from the Everport Container Terminal, as well as those streets that would be used by construction traffic (i.e., equipment and commuting workers). The transportation analysis includes freeway segments (12 segments) and intersections (18 key intersections) that would be used by truck and automobile traffic to gain access to and from the Project site. The segments and key intersections are presented in Section 3.6.2.

4.2.6.2 Methodology

Cumulative impacts for ground transportation are assessed by quantifying differences between future baseline conditions and future conditions with the proposed Project to determine the proposed Project's contribution to the cumulative impact. This comparison differs from the analysis in Section 3.6, Ground Transportation, in that it considers the proposed Project in the context of the regional conditions that will exist in the future, given normal growth and the traffic generated by the related projects in Table 4-1.

The NEPA cumulative impact analysis of the No Federal Action scenarios includes cumulative projected land use and transportation conditions where the on-site conditions for the Project site are those that would be present without the issuance of a federal permit. The CEQA cumulative impact analysis of the No Project scenario represents operating conditions without the proposed Project, and accounts for growth in container movements up to the existing capacity of the terminal. The No Federal Action Alternative and the No Project Alternative are the same from a terminal capacity and operational standpoint, and both scenarios represent the terminal increasing its operational throughput from current levels to its existing capacity of 1,818,000 TEUs annually; the

throughput of both alternatives would be 1,278,000 TEUs in 2019, 1,430,000 TEUs in 2026 and1,818,000 TEUs in 2038.

Traffic operating conditions at the study intersections for the years 2019, 2026, and 2038 were estimated by adding traffic associated with regional traffic growth and increases in the Port throughput to CEQA baseline conditions in the Port area. Local traffic growth was forecast based on a computerized traffic analysis tool known as the Port Area Travel Demand Model, which includes regional traffic growth as well as growth for the Port and the local area, and supplements the growth factors described below.

Background traffic growth occurs as a result of regional growth in employment, population, schools, and other activities. Most of the past, present, and reasonably foreseeable future projects are covered by the growth forecasts of the Port Area Travel Demand Model. Other local projects are not included in the SCAG Regional Model and were thus separately accounted for in the Port Area Travel Demand Model (e.g., the San Pedro Waterfront Project). All Port and Port of Long Beach projected container and non-container terminal traffic growth are included in the Port Area Travel Demand Model.

The background future intersection traffic volumes (which account for cumulative non-project growth) were developed using SCAG socioeconomic projections, with amendments as reflected in the Port Area Travel Demand Model. The background future freeway traffic volumes along I-110, I-405, I-710, and SR-91 were also obtained from the Port Area Travel Demand Model.

Trip Generation

Future trip generation by the Port of Los Angeles and Port of Long Beach for the years 2019, 2026, and 2038 was estimated by adding traffic resulting from the terminal expansion and associated throughput growth under the current Port of Los Angeles Plan. The 2009 San Pedro Bay Cargo Forecast (The Tioga Group and HIS Global Insight, 2009) was used to determine the total Port throughput for each future analysis year, as described in Chapters 1 and 2. Port-related trip generation was developed using the Port's "QuickTrip" truck generation model. The key operating parameters used in the future trip generation estimate are presented in Section 3.6.4.3.

The net vehicle trips generated by the proposed Project and Alternatives 3, 4, and 5 in 2019, 2026, and 2038 are shown in Tables 4-2 to 4-5. The Project site trip generation was determined by using the proposed Project's TEU projections and QuickTrip outputs less the baseline project site trips. Since the proposed Project trip generation reflects subtraction of the amount of baseline project site trips, future changes in hourly distribution of site trips throughout the day can result in negative net trips from the proposed Project in some scenarios. Alternatives 1 and 2 do not add any additional trips as they do not increase the capacity of the terminal.

Table 4-2: Passenger Car Equivalent (PCE) Trip Generation Estimates for the Proposed Project

Time	Vehicle	2019 With Project			2026 With Project			2038 With Project		
Period	Type	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	Autos	1	1	2	29	24	53	37	31	68
	Trucks	2	1	3	70	64	134	118	109	227
MD Peak Hour	Auto	1	0	1	8	15	23	11	19	30
	Trucks	3	3	5	50	46	96	85	81	166
PM Peak Hour	Auto	1	2	4	19	55	73	-73	71	95
	Trucks	2	2	3	26	29	54	-67	51	95

* Since the proposed Project trip generation is less the amount of baseline project site trips, future changes in hourly distribution of site trips throughout the day can result in negative net trips from the proposed Project in some scenarios.

1

Table 4-3: Passenger Car Equivalent (PCE) Trip Generation Estimates for the Alternative 3

Time	Vehicle	2019 Alternative 3			2026 Alternative 3			2038 Alternative 3		
Period	Type	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	Autos	-1	0	2	29	24	53	37	31	68
	Trucks	-1	-1	3	70	64	134	118	109	227
MD Peak Hour	Auto	136	94	1	8	15	23	11	19	30
	Trucks	5	125	5	50	46	96	85	81	166
PM Peak Hour	Auto	-69	-230	4	19	55	73	-73	71	95
	Trucks	8	-65	3	26	29	54	-67	51	95

* Since the proposed Project trip generation is less the amount of baseline project site trips, future changes in hourly distribution of site trips throughout the day can result in negative net trips from the proposed Project in some scenarios.

2

Table 4-4: Passenger Car Equivalent (PCE) Trip Generation Estimates for the Alternative 4

Time	Vehicle	2019 Alternative 4			2026 Alternative 4			2038 Alternative 4		
Period	Type	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	Autos	-3	-1	-5	15	13	29	20	16	36
	Trucks	-5	-2	-6	34	31	64	62	58	120
MD Peak Hour	Auto	-1	-2	-3	4	8	12	6	10	16
	Trucks	-7	-6	-14	24	22	46	45	43	88
PM Peak Hour	Auto	-4	-7	-11	10	30	40	13	37	50
	Trucks	-4	-4	-9	12	14	26	23	27	50

* Since the proposed Project trip generation is less the amount of baseline project site trips, future changes in hourly distribution of site trips throughout the day can result in negative net trips from the proposed Project in some scenarios.

3

Table 4-5: Passenger Car Equivalent (PCE) Trip Generation Estimates for the Alternative 5

Time	Vehicle	2019 Alternative 5			2026 Alternative 5			2038 Alternative 5		
Period	Type	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	Autos	1	1	2	29	25	54	38	32	70
	Trucks	2	1	3	64	57	121	108	100	208
MD Peak Hour	Auto	1	0	1	8	15	24	11	20	31
	Trucks	3	3	5	45	42	87	78	74	152
PM Peak Hour	Auto	1	2	4	19	55	74	25	72	96
	Trucks	2	2	3	23	26	49	40	46	87

* Since the proposed Project trip generation is less the amount of baseline project site trips, future changes in hourly distribution of site trips throughout the day can result in negative net trips from the proposed Project in some scenarios.

Port-Area Transportation Improvements

Numerous transportation projects are planned for implementation in the Port area by the years 2019, 2026, and 2038. These projects are either included in the RTP and Regional Transportation Improvement Program or were developed as part of Port Planning and implementation efforts. Projects that have been approved by Caltrans through the Project Study Report (PSR) process, are planned to be environmentally cleared, and have committed funding are reasonably foreseeable projects and are therefore included in the transportation analysis as related projects, which are described in Section 3.6 Ground Transportation,

4.2.6.3 Cumulative Impact TRANS-1: Proposed Project construction would not result in a cumulatively considerable short-term, temporary increase in truck and auto traffic—Less than Cumulatively Considerable

Cumulative Impact TRANS-1 represents the potential of the proposed Project along with other cumulative projects to result in a short-term, temporary increase in construction truck and auto traffic, and transport of construction equipment and materials to and from the construction site.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction activities could result in temporary increases in traffic volumes and roadway disruptions in the vicinity of a construction site.

Temporary traffic increases and disruptions due to construction would occur on a transportation system that would also have increased traffic due to background growth. The impact of cumulative construction-generated traffic on transportation operations and safety could be cumulatively significant should it occur concurrently and in the same vicinity.

Contribution of the Proposed Project (Prior to Mitigation)

The total number of construction-related trips would vary during construction of the proposed Project. It is anticipated that the majority of construction materials (i.e., aggregate, concrete, asphalt, sand, and slurry) would be provided by local suppliers and stored at the contractors' existing facilities. The majority of construction materials would be imported during off-peak traffic hours (the main exception being cement trucks, which have a limited window for delivery times). Construction haul routes would be via the I-110 to SR-47 across the Vincent Thomas Bridge or via the I-710 to Ocean Boulevard across the Gerald Desmond Bridge to Pier S Avenue/New Dock Street via Seaside Avenue/Ocean Boulevard.

Workers would be required to arrive at the construction site prior to the A.M. peak period and depart prior to the P.M. peak period. Therefore, significant traffic impacts from construction workers' vehicles would not occur during the A.M. or P.M. peak periods.

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

The proposed Project would be constructed between 2017 through 2019. Of the present and reasonably foreseeable future projects listed in Table 4-1, the other projects on Terminal Island for which it is reasonably foreseeable that construction would occur in the same time period are YTI (#4), APL (#26), and maybe portions of the LAXT Loop Container Staging Yard (#8). These projects, as well as other Port projects, would be subject to the same requirements as the proposed Project for development of a traffic management plan subject to LAHD approval.

Given that most of the traffic associated with construction would occur outside of the peak periods, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 and 3 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA and would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to proposed Project-related construction traffic impacts. Alternative 1 would result in no impact under NEPA, and Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.6.4 Cumulative Impact TRANS-2: The proposed Project operations would not result in a cumulatively considerable long-term impact at study location intersection volume/ capacity ratios or level of service—Cumulatively Considerable

Cumulative Impact TRANS-2 represents the potential of the proposed Project along with other cumulative projects to significantly impact V/C ratios or LOS at intersections within the cumulative transportation area of analysis.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Increases in traffic volumes on the surrounding roadways due to cumulative projects would result in a cumulative effect on the operating conditions of area intersections and roadways. Tables 4-5, 4-6, and 4-7 summarize future cumulative intersection operating conditions in 2019, 2026 and 2038 conditions without and with the proposed Project (cumulative base and cumulative base with proposed Project). Each scenario includes traffic generated by the related projects in Table 4-1. As indicated in the tables, five of the 18 intersections would operate at LOS E or worse in the A.M. and P.M. peak hours, with two of those operated at LOS E or worse in the M.D. peak hour under the future cumulative base conditions by 2038. Therefore, the cumulative projects would cause significant cumulative impacts at these five study intersections.

Contribution of the Proposed Project

In each analysis year, the With Project scenario was compared to the future cumulative baseline scenario (future CEQA baseline and NEPA baseline) to determine potential cumulative and cumulatively considerable impacts, as shown in Tables 4-5, 4-6 and 4-7. The analysis indicates that the proposed Project would result in an increase in the V/C ratio at a number of study locations. However, the amount of proposed Project-related traffic that would be added at the study intersection locations would not be of sufficient magnitude to meet or exceed any of the thresholds of significance at all but one intersection. This includes some intersections that would operate at LOS E or F where the amount of proposed Project-related traffic would be too small to trigger a significant traffic impact. Based on the comparison of the With Project scenarios to cumulative baseline scenarios, the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact at study Intersection #14: Ferry Street at SR-47 (Terminal Island Freeway)/Seaside Ave Ramps under CEQA and NEPA in 2026 and 2038.

Contribution of the Alternatives

Alternative 1 would result in no impact under CEQA and NEPA. Alternative 2 would result in no impact under CEQA, and is not required to be analyzed under NEPA.

Alternatives 3, 4 and 5 have different terminal operating conditions and would have different trip generation and resulting traffic conditions as compared to the proposed Project as shown in Tables 4-2, 4-3, and 4-4 respectively. Although the incremental impacts of the Alternatives 3, 4, and 5 are lower than that of the proposed Project, these alternatives would still make cumulatively considerable contributions to a significant cumulative impact at study Intersection #14: Ferry Street at SR-47 (Terminal Island Freeway)/Seaside Ave Ramps under CEQA and NEPA in 2026 and 2038.

Mitigation Measures and Cumulative Residual Impacts

Intersection #14 is controlled by Caltrans, and is outside of the Port's/LAHD's jurisdiction. No mitigation within the LAHD's control is available to reduce the Project-level operational traffic impact at Intersection #14 or the cumulatively considerable contributions to a significant cumulative impact for the proposed Project and Alternatives 3, 4, and 5 under CEQA and NEPA.

Table 4-5: Intersection Level of Service Analysis—2019 Cumulative Baseline Compared to 2019 Cumulative Baseline with Proposed Project

Int	Study Intersection	2019 Cumulative Baseline						2019 With Proposed Project						Changes in V/C			Sig Impact?		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Alameda St. at Sepulveda Blvd. ramp (on Sepulveda) [1]	F	1.011	B	0.639	F	1.006	F	1.011	B	0.639	F	1.006	0.000	0.000	0.000	No	No	No
2	Alameda St. at Sepulveda Blvd. ramp (on Alameda) [1]	A	0.533	A	0.490	A	0.599	A	0.533	A	0.490	A	0.599	0.000	0.000	0.000	No	No	No
3	Alameda St. at PCH ramp/East O St. (on PCH) [2]	D	0.839	B	0.603	E	0.951	D	0.839	B	0.603	E	0.951	0.000	0.000	0.000	No	No	No
4	Alameda St. at PCH ramp/East O St. (on Alameda) [2]	A	0.415	A	0.514	A	0.510	A	0.415	A	0.514	A	0.510	0.000	0.000	0.000	No	No	No
5	Alameda St, at Henry Ford Ave/Denni St. [2]	A	0.381	A	0.467	A	0.494	A	0.381	A	0.467	A	0.494	0.000	0.000	0.000	No	No	No
6	SR-103 (Terminal Island Fwy) at Sepulveda Blvd. [3]	A	0.563	B	0.628	E	0.939	A	0.563	B	0.628	E	0.938	0.000	0.000	-0.001	No	No	No
7	Henry Ford Avenue at Anaheim Street [2]	B	0.666	B	0.648	E	0.901	B	0.666	B	0.648	E	0.901	0.000	0.000	0.000	No	No	No
8	Henry Ford Avenue at SR-47 (Terminal Island Freeway) Ramps/Pier A Way [2]	B	0.605	A	0.410	A	0.543	B	0.605	A	0.410	A	0.543	0.000	0.000	0.000	No	No	No
9	SR-47 (Terminal Island Freeway) at Ocean Blvd WB Ramps [3]	A	0.584	C	0.593	C	0.604	A	0.584	C	0.593	C	0.605	0.000	0.000	0.001	No	No	No
10	SR-47 (Terminal Island Freeway) at Ocean Blvd EB Ramps [3]	A	0.498	F	0.884	D	0.766	A	0.498	F	0.884	D	0.766	0.000	0.000	0.000	No	No	No
11	Pier S Ave. at Ocean Blvd. Westbound Ramps [3]	A	0.467	A	0.491	A	0.497	A	0.467	A	0.492	A	0.497	0.000	0.001	0.000	No	No	No
12	Pier S Ave. at Ocean Blvd. Eastbound Ramps [3]	A	0.409	A	0.468	B	0.552	A	0.409	A	0.468	B	0.553	0.000	0.000	0.001	No	No	No
13	Navy Way at SR-47 (Terminal Island Fwy)/Seaside Ave [2]	B	0.607	A	0.421	B	0.699	B	0.607	A	0.421	B	0.699	0.000	0.000	0.000	No	No	No
14	Ferry Street at SR-47 (Terminal Island Fwy)/Seaside Ave Ramps [2]	B	0.679	A	0.581	B	0.661	B	0.680	A	0.581	B	0.663	0.001	0.000	0.002	No	No	No
15	Ferry Street at Terminal Way [2]	A	0.365	A	0.259	A	0.193	A	0.366	A	0.261	A	0.193	0.001	0.002	0.000	No	No	No
16	Everport Container Terminal Gate at Terminal Way [2]	A	0.221	A	0.398	A	0.334	Not an Intersection (Internal to the Project Site)											
17	Earle Street at Terminal Way [2]	A	0.403	A	0.405	A	0.326	A	0.417	A	0.459	A	0.412	0.014	0.054	0.086	No	No	No
18	Earle Street at Cannery Street [2]	A	0.119	A	0.165	A	0.121	A	0.355	A	0.361	A	0.321	0.236	0.196	0.200	No	No	No

n/a = not applicable

Notes:

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

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

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

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Table 4-6: Intersection Level of Service Analysis—2026 Cumulative Baseline Compared to 2026 Cumulative Baseline with Proposed Project

Int	Study Intersection	2026 Cumulative Baseline						2026 With Proposed Project						Changes in V/C			Sig Impact?		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Alameda St. at Sepulveda Blvd. ramp (on Sepulveda) [1]	E	0.957	B	0.664	C	0.767	E	0.959	B	0.662	C	0.768	0.002	-0.002	0.001	No	No	No
2	Alameda St. at Sepulveda Blvd. ramp (on Alameda) [1]	C	0.757	A	0.590	B	0.623	C	0.757	A	0.588	B	0.623	0.000	-0.002	0.000	No	No	No
3	Alameda St. at PCH ramp/East O St. (on PCH) [2]	C	0.761	A	0.545	C	0.711	C	0.761	A	0.543	C	0.713	0.000	-0.002	0.002	No	No	No
4	Alameda St. at PCH ramp/East O St. (on Alameda) [2]	C	0.773	A	0.555	A	0.464	C	0.773	A	0.562	A	0.463	0.000	0.007	-0.001	No	No	No
5	Alameda St, at Henry Ford Ave/Denni St. [2]	C	0.732	A	0.488	A	0.511	C	0.729	A	0.487	A	0.511	-0.003	-0.001	0.000	No	No	No
6	SR-103 (Terminal Island Fwy) at Sepulveda Blvd. [3]	C	0.781	D	0.810	C	0.732	C	0.783	D	0.816	C	0.729	0.002	0.006	-0.003	No	No	No
7	Henry Ford Avenue at Anaheim Street [2]	E	0.938	C	0.720	D	0.888	F	1.043	C	0.788	E	0.920	-0.001	0.004	0.003	No	No	No
8	Henry Ford Avenue at SR-47 (Terminal Island Freeway) Ramps/Pier A Way [2]	C	0.790	A	0.447	A	0.512	C	0.791	A	0.449	A	0.516	0.001	0.002	0.004	No	No	No
9	SR-47 (Terminal Island Freeway) at Ocean Blvd WB Ramps [3]	E	0.990	D	0.699	C	0.679	E	0.995	D	0.699	D	0.691	0.005	0.000	0.012	No	No	No
10	SR-47 (Terminal Island Freeway) at Ocean Blvd EB Ramps [3]	F	1.279	F	1.060	E	0.856	F	1.284	F	1.068	E	0.870	0.005	0.008	0.014	No	No	No
11	Pier S Ave. at Ocean Blvd. Westbound Ramps [3]	C	0.787	B	0.571	A	0.498	C	0.794	B	0.572	B	0.502	0.007	0.001	0.004	No	No	No
12	Pier S Ave. at Ocean Blvd. Eastbound Ramps [3]	C	0.754	B	0.564	C	0.630	C	0.760	B	0.571	C	0.642	0.006	0.007	0.012	No	No	No
13	Navy Way at SR-47 (Terminal Island Fwy)/Seaside Ave [2]	D	0.851	A	0.495	B	0.690	D	0.855	A	0.501	B	0.694	0.004	0.006	0.004	No	No	No
14	Ferry Street at SR-47 (Terminal Island Fwy)/Seaside Ave Ramps [2]	F	1.028	B	0.668	C	0.767	F	1.048	B	0.685	D	0.808	0.020	0.017	0.041	**Yes**	No	**Yes**
15	Ferry Street at Terminal Way [2]	A	0.504	A	0.248	A	0.206	A	0.533	A	0.289	A	0.218	0.029	0.041	0.012	No	No	No
16	Everport Container Terminal Gate at Terminal Way [2]	A	0.461	A	0.423	A	0.336	Not an Intersection (Internal to the Project Site)											
17	Earle Street at Terminal Way [2]	A	0.573	A	0.449	A	0.342	B	0.638	A	0.541	A	0.447	0.065	0.092	0.105	No	No	No
18	Earle Street at Cannery Street [2]	A	0.127	A	0.168	A	0.132	A	0.372	A	0.367	A	0.332	0.245	0.199	0.200	No	No	No

n/a = not applicable

Notes:

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

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

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

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Table 4-7: Intersection Level of Service Analysis—2038 Cumulative Baseline Compared to 2038 Cumulative Baseline with Proposed Project

Int	Study Intersection	2038 Cumulative Baseline						2038 With Proposed Project						Changes in V/C			Sig Impact?		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Alameda St. at Sepulveda Blvd. ramp (on Sepulveda) [1]	F	1.007	D	0.816	E	0.936	F	1.009	D	0.813	E	0.938	0.002	-0.003	0.002	No	No	No
2	Alameda St. at Sepulveda Blvd. ramp (on Alameda) [1]	D	0.815	B	0.618	B	0.670	D	0.820	B	0.615	B	0.670	0.005	-0.003	0.000	No	No	No
3	Alameda St. at PCH ramp/East O St. (on PCH) [2]	D	0.848	C	0.702	D	0.823	D	0.847	B	0.699	D	0.825	-0.001	-0.003	0.002	No	No	No
4	Alameda St. at PCH ramp/East O St. (on Alameda) [2]	D	0.875	B	0.609	A	0.532	D	0.873	B	0.621	A	0.533	-0.002	0.012	0.001	No	No	No
5	Alameda St, at Henry Ford Ave/Denni St. [2]	D	0.824	A	0.542	A	0.578	D	0.821	A	0.541	A	0.576	-0.003	-0.001	-0.002	No	No	No
6	SR-103 (Terminal Island Fwy) at Sepulveda Blvd. [3]	D	0.853	D	0.877	D	0.847	D	0.857	D	0.886	D	0.837	0.004	0.009	-0.010	No	No	No
7	Henry Ford Avenue at Anaheim Street [2]	F	1.047	D	0.884	E	0.976	F	1.166	E	0.965	F	1.031	-0.002	0.008	0.005	No	No	No
8	Henry Ford Avenue at SR-47 (Terminal Island Freeway) Ramps/Pier A Way [2]	D	0.858	A	0.483	A	0.565	D	0.859	A	0.486	A	0.571	0.001	0.003	0.006	No	No	No
9	SR-47 (Terminal Island Freeway) at Ocean Blvd WB Ramps [3]	F	1.095	E	0.823	E	0.802	F	1.104	E	0.840	E	0.820	0.009	0.017	0.018	No	No	No
10	SR-47 (Terminal Island Freeway) at Ocean Blvd EB Ramps [3]	F	1.490	F	1.248	F	1.017	F	1.496	F	1.270	F	1.038	0.006	0.022	0.021	No	No	No
11	Pier S Ave. at Ocean Blvd. Westbound Ramps [3]	D	0.844	C	0.624	B	0.559	D	0.855	C	0.627	B	0.564	0.011	0.003	0.005	No	No	No
12	Pier S Ave. at Ocean Blvd. Eastbound Ramps [3]	D	0.850	C	0.647	D	0.725	D	0.859	C	0.658	D	0.742	0.009	0.011	0.017	No	No	No
13	Navy Way at SR-47 (Terminal Island Fwy)/Seaside Ave [2]	Not an Intersection (Interchange Improvement)																	
14	Ferry Street at SR-47 (Terminal Island Fwy)/Seaside Ave Ramps [2]	F	1.218	D	0.816	E	0.958	F	1.250	D	0.845	F	1.017	0.032	0.029	0.059	**Yes**	**Yes**	**Yes**
15	Ferry Street at Terminal Way [2]	A	0.545	A	0.347	A	0.141	A	0.591	A	0.370	A	0.159	0.046	0.023	0.018	No	No	No
16	Everport Container Terminal Gate at Terminal Way [2]	A	0.459	A	0.420	A	0.335	Not an Intersection (Internal to the Project Site)											
17	Earle Street at Terminal Way [2]	A	0.566	A	0.440	A	0.353	B	0.669	A	0.563	A	0.455	0.103	0.123	0.102	No	No	No
18	Earle Street at Cannery Street [2]	A	0.136	A	0.171	A	0.147	A	0.389	A	0.372	A	0.348	0.253	0.201	0.201	No	No	No

n/a = not applicable

Notes:

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

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

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

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4.2.6.5 Cumulative Impact TRANS-3: An increase in on-site employees due to proposed Project operations would not contribute to a cumulatively significant increase in related public transit use—Less than Cumulatively Considerable

Cumulative Impact TRANS-3 represents the potential of the proposed Project along with other cumulative projects to result in a significant increase in related public transit use.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects have contributed to the current transit demand, and present and future projects would result in an additional transit demand due to employees, the increase in work-related trips, and increases in school- and shopping-related transit trips. Cumulatively, the projects combined could result in an increase in demand for transit; however, this is not expected to exceed transit supply and thus would not result in a significant cumulative impact. Section 3.6.2.3 describes the existing local and regional transit services (Metro, Torrance Transit, Long Beach Transit, etc.) in the proposed Project area. These providers continually monitor cumulative transit demand and enhance or adjust services to meet demand, based on available funding.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.6, the proposed Project would create additional on-site employees; however, the increase in work-related trips using public transit would be negligible. Port terminals generate low transit demand for several reasons. The primary reason that proposed Project workers generally would not use public transit is that they often report to union halls to receive work assignments and therefore make multiple stops prior to arrival at the terminal, which makes use of fixed route transit services inefficient. Other factors include a lack of transit stops on Terminal Island and limited transit schedules. Therefore, most workers prefer to use a personal automobile to facilitate timely commuting. Also, Port workers' incomes are generally higher than similarly skilled jobs in other areas and higher incomes correlates to lower transit usage. In addition, parking at the Port is readily available and free for employees, which encourages workers to drive to work. Finally, although there are 16 existing transit routes that serve the general area surrounding the proposed Project, none of the existing routes stop within one mile of the Project site. There are no other cumulative projects that are expected to generate increased demand for transit services along the same transit routes serving the proposed Project. Consequently, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and neither would Alternatives 1, and 3 through 5 under NEPA related to public transit use. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.6.6 Cumulative Impact TRANS-4: Proposed Project operations would not result in increases considered cumulatively considerable related to freeway congestion—Less Than Cumulatively Considerable

Cumulative Impact TRANS-4 represents the potential of the proposed Project along with other cumulative projects to result in a significant increase in freeway congestion.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Freeway traffic levels have continued to increase in and near the study area due to development activity in San Pedro, Wilmington, Harbor City, and the Southern California region as a whole. Not only has local development resulted in additional freeway traffic on I-110 and SR-47, but also regional increases in traffic have resulted in increased diversion of traffic from other congested facilities such as I-405 to the freeways near the proposed Project study area. Traffic volumes on all nearby freeways have increased over the past decade. The cumulative projects would be expected to result in significant cumulative impacts on the freeway system in the future as well. The cumulative projects would add traffic to the freeways, some of which are already operating at LOS F, which exceeds the State of California Congestion Management Plan (CMP) threshold for acceptable operating conditions. Regional improvements are programmed through the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP). The projects that are programmed are intended to mitigate the impacts of cumulative and regional traffic growth, but the extent to which they will mitigate future cumulative impacts on the freeway system within the study area is unknown.

Caltrans states that their target freeway LOS is between C and D, and for facilities that do not meet that target, the existing measure of effectiveness (MOE) should be maintained. However, Caltrans does not explicitly define thresholds that determine whether that goal is met. Therefore, this EIS/EIR utilizes Metro's CMP guidelines to determine significant impacts on freeways. For segments operating at LOS E or F, Demand/Capacity (D/C) was used to determine significance of impacts. 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 following freeway segments were analyzed for potential impacts:

1) SR-47 at Vincent Thomas Bridge
2) SR-47/SR-103 at Commodore Schuyler Heim Bridge
3) I-110 south of C Street (CMP freeway monitoring station—south of C Street);
4) I-110 north of 223rd Street
5) I-110 north of I-405

6) I-710 north of PCH (CMP freeway monitoring station—north of the junction ofSR-1 [PCH] and Willow Street);
7) I-710 north of I-405 (CMP freeway monitoring station—north of the junction ofI-405, south of Del Amo Boulevard);
8) I-710 north of Alondra Boulevard
9) I-710 north of Firestone Boulevard (CMP freeway monitoring station—north of the junction ofI-105, north of Firestone Boulevard);
10) I-710 north of Florence Avenue;
11) I-405 between I-110 and I-710 (CMP freeway monitoring station—at Santa Fe Avenue);
12) SR-91 west of I-710 (CMP freeway monitoring station—east of Alameda Street and Santa Fe Avenue interchange)

Vehicle queuing analysis was conducted at the Ferry Street/SR-47 ramps, which are the closest state highway system ramps serving the proposed Project. Tables 4-7 and 4-8 show the expected volumes of cumulative traffic on those segments in the 2038 No Project scenario (CEQA 2038 future cumulative baseline and NEPA baseline). The past, present, and reasonably foreseeable future projects and background growth would add traffic to the freeway system and at the study segments, resulting in significant cumulative impacts to monitoring stations operating at LOS F or worse. Cumulative impacts would be expected to occur at the following study freeway segments:

- SR-47 at Vincent Thomas Bridge: A.M. and P.M. peak hour, eastbound direction
- I-110 north of 223rd Street: A.M. peak hour, northbound direction
- I-710 north of PCH: A.M. peak hour, northbound and southbound direction
- I-710 north of I-405: A.M. peak hour, northbound and southbound direction
- I-710 north of Firestone Boulevard: A.M. peak hour, southbound direction; P.M. peak hour, southbound direction
- I-710 north of Florence Boulevard: A.M. peak hour, southbound direction
- I-405 between I-110 and I-710: P.M. peak hour, southbound direction

Contribution of the Proposed Project (Prior to Mitigation)

As prescribed in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans, 2002) the cumulative conditions without the proposed Project are to be compared to the cumulative conditions with the proposed Project in 2038.

Tables 4-8 and 4-9 show a comparison of the 2038 No Project and 2038 with proposed Project volumes (i.e., the cumulatively considerable potential impacts for the highest level of activity analyzed at the Project site). As shown in the tables, the 2038 cumulative proposed Project traffic impacts would not exceed the CMP thresholds and increase V/C ratios by more than 0.02 at the study segments operating at LOS F or worse, thereby not creating a cumulatively considerable impact. Consequently, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative freeway traffic impact under CEQA or NEPA.

Contribution of the Alternatives

Since the incremental impacts of Alternatives 1 through 4 are lower than that of the proposed Project, and Alternative 5 is the same as the proposed project, these alternatives would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

Table 4-8: 2038 Cumulative Baseline Compared to 2038 Cumulative Baseline With Proposed Project Freeway Analysis—A.M. Peak

			Northbound / Eastbound												Southbound / Westbound									
			2038 Cumulative Baseline					2038 With Proposed Project					Change in D/C	Sign. Impt?	2038 Cumulative Baseline					2038 With Proposed Project					Change in D/C	Sign. Impt?
Freeway	Location	Cap.	Vol	Density	LOS	D/C	LOS	Vol	Density	LOS	D/C	LOS			Vol	Density	LOS	D/C	LOS	Vol	Density	LOS	D/C	LOS		
#1 SR-47	Vincent Thomas Bridge [1]	4,700	4,365	47.0	F	0.93	D	4,407	48.0	F	0.94	E	0.01	No	3,602	34.6	D	-		3,630	34.9	D	-		-	No
#2 SR-47/SR-103	Commodore Schuyler Heim Bridge [1]	6,750	2,180	13.9	B	-		2,205	14.1	B	-		-	No	2,964	18.9	C	-		3,012	19.2	C	-		-	No
#3 I-110	South of C Street (CMP monitoring station—south of C Street)	9,400	7,336	31.6	D	-		7,357	31.8	D	-		-	No	6,302	25.9	C	-		6,319	26.0	C	-		-	No
#4 I-110	North of 223rd Street [1]	9,400	9,889	58.5	F	1.05	F(0)	9,902	58.7	F	1.05	F(0)	0.00	No	8,407	28.1	D	-		8,420	28.1	D	-		-	No
#5 I-110	North of I-405 [1]	11,750	10,533	39.9	E	0.90	D	10,542	40.0	E	0.90	D	0.00	No	11,957	53.2	F	1.02	F(0)	11,964	53.3	F	1.02	F(0)	0.00	No
#6 I-710	North of PCH (CMP monitoring station—north of the junction of SR-1 [PCH], Willow Street)	6,750	7,865	85.5	F	1.17	F(0)	7,910	88.1	F	1.17	F(0)	0.00	No	8,784	213.8	F	1.30	F(0)	8,830	231.5	F	1.31	F(0)	0.01	No
#7 I-710	North of I-405 (CMP monitoring station—north of the junction of I-405, south of Del Amo)	9,000	10,029	70.2	F	1.11	F(0)	10,071	71.3	F	1.12	F(0)	0.01	No	9,583	59.9	F	1.06	F(0)	9,630	60.8	F	1.07	F(0)	0.01	No
#8 I-710	North of Alondra Boulevard [1]	11,750	9,556	33.7	D	-		9,594	33.9	D	-		-	No	10,226	37.8	E	0.87	D	10,270	38.1	E	0.87	D	0.00	No
#9 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,567	41.3	E	0.91	D	8,595	41.5	E	0.91	D	0.00	No	9,532	52.7	F	1.01	F(0)	9,567	53.2	F	1.02	F(0)	0.01	No
#10 I-710	North of Florence Avenue [1]	9,400	8,545	41.0	E	0.91	D	8,572	41.3	E	0.91	D	0.00	No	10,645	75.4	F	1.13	F(0)	10,678	76.3	F	1.14	F(0)	0.01	No
#11 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Avenue)	11,750	10,741	41.5	E	0.91	D	10,741	41.5	E	0.91	D	0.00	No	8,205	27.2	D	-		8,205	27.2	D	-		-	No
#12 SR-91	West of I-710 (CMP monitoring station—east of Alameda Street/Santa Fe Avenue interchange)	14,100	8,650	23.4	C	-		8,650	23.4	C	-		-	No	7,511	20.3	C	-		7,511	20.3	C	-		-	No

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

1

Table 4-9: 2038 Cumulative Baseline Compared to 2038 Cumulative Baseline With Proposed Project Freeway Analysis—P.M. Peak

			Northbound / Eastbound											Southbound / Westbound										
			2038 Cumulative Baseline					2038 With Proposed Project						2038 Cumulative Baseline					2038 With Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C	LOS	Vol	Density	LOS	D/C	LOS	Change in D/C	Sign. Impt?	Vol	Density	LOS	D/C	LOS	Vol	Density	LOS	D/C	LOS	Change in D/C	Sign. Impt?
#1 SR-47	Vincent Thomas Bridge [1]	4,700	4,585	52.8	F	0.98	E	4,649	54.8	F	0.99	E	0.01	No	3,277	31.4	D	-		3,305	31.6	D	-		-	No
#2 SR-47/SR-103	Commodore Schuyler Heim Bridge [1]	6,750	2,079	13.3	B	-		2,135	13.6	B	-		-	No	1,870	11.9	B	-		1,914	12.2	B	-		-	No
#3 I-110	South of C Street (CMP monitoring station—south of C Street)	9,400	5,232	21.2	C	-		5,273	21.3	C	-		-	No	5,460	22.1	C	-		5,476	22.2	C	-		-	No
#4 I-110	North of 223rd Street [1]	9,400	6,809	28.5	D	-		6,833	28.7	D	-		-	No	8,089	26.7	D	-		8,102	26.8	D	-		-	No
#5 I-110	North of I-405 [1]	11,750	9,976	36.2	E	0.85	D	9,989	36.3	E	0.85	D	0.00	No	10,814	42.1	E	0.92	D	10,822	42.1	E	0.92	D	0.00	No
#6 I-710	North of PCH (CMP monitoring station—north of the junction of SR-1 [PCH], Willow Street)	6,750	5,476	35.2	E	0.81	D	5,550	35.8	E	0.82	D	0.01	No	6,020	40.2	E	0.89	D	6,080	40.8	E	0.90	D	0.01	No
#7 I-710	North of I-405 (CMP monitoring station—north of the junction of I-405, south of Del Amo)	9,000	8,059	40.4	E	0.90	D	8,131	41.0	E	0.90	D	0.00	No	6,600	31.6	D	-		6,659	31.9	D	-		-	No
#8 I-710	North of Alondra Boulevard [1]	11,750	8,550	28.7	D	-		8,614	29.0	D	-		-	No	6,790	22.0	C	-		6,849	22.2	C	-		-	No
#9 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,462	40.3	E	0.90	D	8,510	40.7	E	0.91	D	0.01	No	6,668	27.8	D	-		6,708	28.0	D	-		-	No
#10 I-710	North of Florence Avenue [1]	9,400	8,566	41.2	E	0.91	D	8,612	41.7	E	0.92	D	0.01	No	6,187	25.3	C	-		6,225	25.5	C	-		-	No
#11 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Avenue)	11,750	9,687	34.4	D	-		9,687	34.4	D	-		-	No	11,211	45.5	F	0.95	E	11,211	45.5	F	0.95	E	0.00	No
#12 SR-91	West of I-710 (CMP monitoring station—east of Alameda Street/Santa Fe Avenue interchange)	14,100	6,735	18.2	C	-		6,735	18.2	C	-		-	No	8,082	22.2	C	-		8,082	13.4	C	-		-	No

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

2

4.2.6.7 Cumulative Impact TRANS-5 (For Informational Purposes): Proposed Project operations would not cause a cumulatively considerable increase in vehicular delay at railroad grade crossings in excess of the threshold.

Cumulative Impact TRANS-5 represents the potential of the proposed Project along with other cumulative projects to cause an increase in rail activity, causing delay in traffic. As discussed in Section 3.6.4.4 for Impact TRANS-5, the discussion of the rail transport of goods outside of the Port area is applicable only to CEQA, and is presented for informational purposes only.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Impacts of the past, present, and reasonably foreseeable future projects on the regional rail corridors north of the Project site would not be significant since the Alameda Corridor project has been completed. The completion of the corridor has eliminated the regional at-grade rail/highway crossings between the Port and the downtown railyards; therefore, there would be no change in vehicular delay at any of those crossings due to the past, present, and reasonably foreseeable future projects that include rail activity (they are now all grade separated). There would be a significant cumulative impact on the at-grade rail crossings east of downtown Los Angeles. This cumulative impact would be due to the overall growth in rail activity that would occur to serve the added cargo throughput in the Southern California region and the nation.

Contribution of the Proposed Project (Prior to Mitigation)

To provide a comprehensive understanding of the proposed Project's vehicular delay impacts, an analysis was performed for the proposed Project's impacts in comparison to delay in the year 2038 without the proposed Project. Thus, potential cumulative rail impacts were assessed by quantifying differences in vehicular delays due to at-grade crossings between future conditions without the proposed Project for the year 2038 and future conditions with the proposed Project.

Table 4-10 shows the estimated rail volumes under the two 2038 scenarios: Cumulative Baseline and Cumulative Baseline with proposed Project. Tables 4-11 through 4-16 list the cumulative delays at inland at-grade crossings for the 2038 with proposed Project scenario. As can be seen, the cumulative delay is projected to increase slightly, but none of the locations experienced an average peak delay greater than 55 seconds in either the 2038 Cumulative Baseline or the 2038 Cumulative Baseline with proposed Project scenarios. Thus, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact relative to an increase in rail activity and/or delays in regional traffic under CEQA

The rail lines beyond the Hobart and East Los Angeles yards are the outer geographic limits from Port of Los Angeles terminals. USACE has evaluated cumulative rail-related impacts in previous EIS/EIRs, and they also represent USACE's outer geographical limits of NEPA evaluation of cumulative rail-related impacts in this EIS/EIR. Therefore, Cumulative Impact TRANS-5 is not required to be analyzed under NEPA.

Table 4-10: 2038 Cumulative Baseline Scenario and 2038 Cumulative Baseline with proposed Project Scenario Peak Month Average Daily Rail Volumes by Segment, Trains per Day

Railroad Subdivision	Rail Segment	2038 No Project Daily Freight Rail Volume	2038 with proposed Project Daily Freight Rail Volume	2038 Passenger Rail Volume	2038 No Project Daily Total Rail Volume	2038 with proposed Project Daily Total Rail Volume
UP Trains						
UPRR LA Sub	East LA – Pomona	36.6	37.7	12.0	48.6	49.7
	Pomona – Montclair	41.9	43.0	12.0	53.9	55.0
	Montclair - Mira Loma	41.9	43.0	12.0	53.9	55.0
	Mira Loma - W Riverside	46.9	48.0	12.0	58.9	60.0
UPRR Alhambra Sub	LATC - El Monte	47.3	48.3	-	47.3	48.3
	El Monte - Bassett	47.3	48.3	40.8	90.1	91.1
	Bassett - Industry	47.3	48.3	0.8	48.1	49.1
	Industry - Pomona	59.2	60.2	0.8	60.0	61.0
	Pomona - Montclair	60.0	61.0	0.8	60.8	61.8
	Montclair - Kaiser	60.0	61.0	0.8	60.8	61.8
	Kaiser - W Colton	60.0	61.0	0.8	60.8	61.8
	W Colton - Colton	56.5	57.4	0.8	57.3	58.2
UPRR Mojave (Palmdale)	W Colton - Silverwood	24.2	24.4	-	24.2	24.4
UPRR Yuma	Colton - Indio	91.4	93.1	0.8	92.2	93.9
BNSF San Bernardino Sub	W Riverside - Riverside	46.6	48.0	-	46.6	48.0
	Riverside - Highgrove	46.6	48.0	-	46.6	48.0
	Highgrove - Colton	46.6	48.0	-	46.6	48.0
	Colton - San Bernardino	8.0	9.4	-	8.0	9.4
BNSF Cajon	San Bernardino - Keenbrook	11.2	11.4	-	11.2	11.4
	Keenbrook - Silverwood	11.2	11.4	-	11.2	11.4
	Silverwood - Barstow	29.6	29.8	-	29.6	29.8
BNSF Trains						
BNSF San Bernardino Sub	Hobart - Fullerton	76.5	78.2	77.0	153.5	155.2
	Fullerton - Atwood	76.5	78.2	22.0	98.5	100.2
	Atwood - W Riverside	85.5	87.2	42.0	127.5	129.2
	W Riverside - Riverside	85.5	87.2	54.0	139.5	141.2

Table 4-10: 2038 Cumulative Baseline Scenario and 2038 Cumulative Baseline with proposed Project Scenario Peak Month Average Daily Rail Volumes by Segment, Trains per Day

Railroad Subdivision	Rail Segment	2038 No Project Daily Freight Rail Volume	2038 with proposed Project Daily Freight Rail Volume	2038 Passenger Rail Volume	2038 No Project Daily Total Rail Volume	2038 with proposed Project Daily Total Rail Volume
	Riverside - Highgrove	85.5	87.2	42.0	127.5	129.2
	Highgrove - Colton	85.5	87.2	22.0	107.5	109.2
	Colton - San Bernardino	87.5	89.2	22.0	109.5	111.2
BNSF Cajon	San Bernardino - Keenbrook	96.2	97.9	2.0	98.2	99.9
	Keenbrook - Silverwood	96.2	97.9	2.0	98.2	99.9
	Silverwood – Barstow	96.2	97.9	2.0	98.2	99.9
BNSF & UP Trains						
BNSF San Bernardino Sub	W Riverside - Riverside	132.1	135.2	54.0	186.1	189.2
	Riverside – Highgrove	132.1	135.2	42.0	174.1	177.2
	Highgrove – Colton	132.1	135.2	22.0	154.1	157.2
	Colton - San Bernardino	95.5	98.6	22.0	117.5	120.6
BNSF Cajon	San Bernardino – Keenbrook	107.5	109.3	2.0	109.5	111.3
	Keenbrook - Silverwood	131.7	133.7	2.0	133.7	135.7
	Silverwood – Barstow	125.8	127.7	2.0	127.8	129.7

Source: QuickTrip—Train Builder Integrated Model August 2016 Version for ECT DEIR; Non-intermodal and Passenger Trains Forecasts

1

Table 4-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
San Bernardino MP 0.0								
Laurel Street	2	3,400	120.4	257.4	13.9	15.4	0.5	No
Olive Street	2	4,030	120.4	257.4	16.8	15.8	0.6	No
E Street	2	1,070	120.4	257.4	4.1	14.0	0.5	No
H Street	2	2,110	120.4	257.4	8.3	14.6	0.5	No
Valley Boulevard	2	15,910	120.4	257.4	109.3	32.3	1.2	No
Colton Crossing MP 3.2								
Highgrove Junction MP 6.1 (Connection to Perris via MetroLink)								
Main Street	2	3,870	197.0	363.0	22.8	22.4	0.6	No
Riverside-San Bernardino County Line MP 6.41								
Center Street	4	9,860	197.0	364.0	60.3	23.3	0.6	No
Iowa Avenue	4	36,350	197.0	364.0	380.0	48.2	1.4	No
Palmyrita Avenue	2	5,950	197.0	363.0	37.4	24.1	0.6	No
Chicago Avenue	4	21,520	197.0	364.0	159.7	30.2	0.8	No
Spruce Street	4	11,500	197.0	364.0	72.1	24.0	0.6	No
3rd Street	4	17,300	197.0	364.0	119.0	27.3	0.7	No
Mission Inn (7th Street)	4	8,460	197.0	364.0	50.8	22.6	0.6	No
Riverside Yard and Amtrak Station MP 10.02-10.16								
Cridge Street	2	5,970	189.0	373.5	37.9	24.7	0.6	No
West Riverside Junction MP 10.6 (Connection to UP Los Angeles Sub)								

Table 4-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Jane Street	2	3,430	129.0	245.7	12.9	14.1	0.3	No
Mary Street	4	18,940	129.0	246.3	84.5	18.0	0.4	No
Washington Street	2	13,150	129.0	245.7	66.3	21.4	0.5	No
Madison Street	4	24,940	129.0	246.3	123.1	20.8	0.5	No
Jefferson Street	2	13,000	129.0	245.7	65.1	21.3	0.5	No
Adams Street	4	27,780	129.0	246.3	144.7	22.4	0.5	No
Jackson Street	4	12,400	129.0	246.3	50.2	15.7	0.3	No
Gibson Street	2	1,360	129.0	245.7	4.8	13.2	0.3	No
Harrison Street	2	10,580	129.0	245.7	48.7	18.9	0.4	No
Tyler Street	4	24,790	129.0	246.3	122.1	20.7	0.4	No
Pierce Street	2	17,740	129.0	245.7	108.8	28.2	0.6	No
Buchanan Street	2	15,190	129.0	245.7	83.0	24.0	0.5	No
Magnolia Avenue (eastbound)	2	13,960	129.0	245.7	72.6	22.4	0.5	No
Magnolia Avenue (westbound)	2	13,960	129.0	245.7	72.6	22.4	0.5	No
Mckinley Street	4	42,270	129.0	246.3	313.5	36.8	0.8	No
Radio Road	2	6,820	129.0	245.7	28.0	16.0	0.3	No
Joy Street	2	11,550	129.0	245.7	54.9	19.8	0.4	No
Sheridan Street	2	3,750	129.0	245.7	14.2	14.3	0.3	No
Cota Street	4	9,570	129.0	246.3	37.3	14.9	0.3	No
Railroad Street	4	15,350	129.0	246.3	64.8	16.7	0.4	No
Smith Street	4	21,720	129.0	246.3	101.4	19.2	0.4	No
Auto Center Drive	2	18,360	129.0	245.7	116.1	29.5	0.7	No
Riverside-Orange County Line								
Kellogg Drive	4	8,280	129.0	246.3	31.9	14.7	0.3	No
Lakeview Avenue	3	22,710	129.0	246.0	128.5	25.3	0.6	No
Richfield Road	4	11,410	129.0	246.3	46.0	15.6	0.3	No

Table 4-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Atwood Junction MP 40.6 (Connection to Old Olive Sub)								
Van Buren Street	2	8,150	100.0	214.3	31.9	15.6	0.4	No
Jefferson Street	3	7,650	100.0	214.6	27.5	13.8	0.3	No
Tustin Avenue (Rose Drive)	4	35,110	100.0	214.9	200.8	26.7	0.6	No
Orangethorpe Avenue	4	34,090	100.0	214.9	189.9	25.7	0.6	No
Kraemer Boulevard	4	23,820	100.0	214.9	106.4	18.8	0.4	No
Placentia Avenue	4	17,450	100.0	214.9	69.9	16.1	0.4	No
State College Boulevard	4	28,380	100.0	214.9	138.7	21.3	0.5	No
Acacia Avenue	4	8,110	100.0	214.9	28.4	13.2	0.3	No
Raymond Avenue	4	25,310	100.0	214.9	116.3	19.5	0.5	No
Fullerton Junction MP 45.5 = MP 165.5								
Orange-LA County Line								
Valley View Avenue	4	29,000	155.0	256.6	164.7	25.3	0.6	No
Rosecrans/Marquardt Avenue	4	27,380	155.0	256.6	149.8	24.0	0.5	No
Lakeland Road	2	7,720	155.0	255.7	33.4	17.3	0.4	No
Los Nietos Road	4	24,160	155.0	256.6	123.3	21.8	0.5	No
Norwalk Boulevard	4	30,980	155.0	256.6	184.7	27.1	0.6	No
Pioneer Boulevard	4	18,080	155.0	256.6	82.2	18.5	0.4	No
Passons Boulevard	4	14,980	155.0	256.6	64.6	17.2	0.4	No
Serapis Avenue	2	7,400	155.0	255.7	31.6	17.1	0.4	No
Commerce Yard MP 148.5								
Hobart Yard MP 146.0								

Table 4-11: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**4,832.4**			
Maximum P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						**48.2**		

1

2

Table 4-12: BNSF Cajon Subdivision from San Bernardino to Barstow, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Barstow MP 0								
Lenwood Road	2	6,810	129.7	245.2	22.5	12.6	0.2	No
Hinkley Road	2	730	129.7	245.2	2.1	10.4	0.2	No
Indian Trail Road	2	820	129.7	245.2	2.4	10.4	0.2	No
Vista Road	2	4,200	129.7	245.2	13.0	11.5	0.2	No
Turner Road	2	50	129.7	245.2	0.1	10.2	0.2	No
North Bryman Road	2	250	129.7	245.2	0.7	10.2	0.2	No
South Bryman Road	2	2,920	129.7	245.2	8.8	11.1	0.2	No
Robinson Ranch Road	2	170	129.7	245.2	0.5	10.2	0.2	No
1st Street	2	1,050	129.7	290.7	4.3	14.8	0.3	No
6th Street	4	5,460	129.7	338.7	31.5	21.2	0.4	No
Silverwood Junction MP 56.6								
Keenbrook Junction MP 69.4								
Swarthout Canyon Road	2	280	135.7	428.6	2.4	30.3	0.6	No
Devore Road/Glen Helen Parkway	4	9,510	135.7	429.6	88.8	35.0	0.7	No
Dike Junction								
Palm Avenue	2	17,970	111.3	359.3	213.5	52.2	1.1	No
San Bernardino MP 81.4								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**390.4**			
Maximum P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						**52.2**		

1

Table 4-13: UP Alhambra Subdivision from Los Angeles Transportation Center (LATC) to Colton Crossing, 2038 with Proposed Project Scenario (Excluding Segment that Is Combined with UP LA Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
LATC MP 482.9								
San Pablo Street	4	4,720	48.2	257.3	42.0	33.1	0.8	No
Vineburn Avenue	2	1,570	48.2	180.8	6.7	15.7	0.4	No
Worth/Boca Road	2	9,130	48.2	180.8	51.0	23.2	0.5	No
Valley Boulevard	4	32,020	48.2	120.4	95.0	13.4	0.3	No
Walnut Grove Avenue	3	17,850	48.2	105.0	34.1	8.0	0.2	No
Encinita Avenue	2	7,440	48.2	104.9	12.3	6.5	0.1	No
Lower Azusa Road	4	20,260	48.2	105.2	36.5	7.3	0.2	No
Temple City Boulevard	4	24,310	48.2	105.2	47.0	8.1	0.2	No
Baldwin Avenue	4	30,140	48.2	105.2	65.3	9.6	0.2	No
Arden Drive	4	12,870	48.2	105.2	20.7	6.2	0.1	No
El Monte Junction MP 494.99								
Tyler Avenue	4	13,700	91.0	135.1	25.7	7.6	0.1	No
Cogswell Road	2	11,720	91.0	134.6	25.8	9.5	0.2	No
Temple Avenue	4	31,500	91.0	135.1	82.4	12.1	0.2	No
Bassett Junction MP 498.45								
Vineland Avenue	2	14,620	49.0	105.6	31.1	9.4	0.2	No
Puente Avenue	4	37,010	49.0	105.8	95.1	12.3	0.3	No
Orange Avenue	2	6,710	49.0	105.6	10.9	6.3	0.1	No
California Avenue	2	21,850	49.0	105.6	69.0	16.6	0.4	No
City of Industry Junction MP 501.5								
Fullerton Road	4	21,290	61.1	133.9	50.5	9.7	0.2	No
Fairway Drive	4	23,090	61.1	133.9	56.5	10.2	0.2	No

Table 4-13: UP Alhambra Subdivision from Los Angeles Transportation Center (LATC) to Colton Crossing, 2038 with Proposed Project Scenario (Excluding Segment that Is Combined with UP LA Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Lemon Road	4	19,990	61.1	133.9	46.4	9.4	0.2	No
Brea Canyon Road	2	16,750	61.1	133.6	50.5	13.9	0.3	No
Pomona Junction MP 514.3	**HANDLED SEPARATELY DUE TO PROXIMITY TO UP LOS ANGELES SUBDIVISION**							
LA-San Bernardino County Line MP 516.7								
Montclair Junction								
Bon View Avenue	2	15,570	61.8	129.4	40.6	11.6	0.2	No
Vineyard Avenue	4	47,770	61.8	129.7	203.8	23.5	0.5	No
Milliken Avenue	6	53,110	61.8	130.0	153.9	13.5	0.3	No
Kaiser Junction MP 527.5								
West Colton MP 534.7								
Colton Crossing MP 538.70								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**1,352.8**			
Maximum P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						**33.1**		

Note: San Gabriel Trench grade separation project will result in the lowering of a 1.4-mile section of Union Pacific railroad track in a trench through the City of San Gabriel with bridges constructed at Ramona Street, Mission Road, Del Mar Avenue and San Gabriel Boulevard. The construction on the bridges is completed, and work continues on the railroad trench. So, these streets are not included in the 2038 Cumulative Analysis of grade crossing impacts although they were included in the 2013 CEQA Baseline plus Project Analysis. (Source: http://www.theaceproject.org/san_gabriel_trench.php, last accessed on March 1, 2017)

Table 4-14: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2038 with Proposed Project Scenario (Excluding Segment that Is Combined with UP Alhambra Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
East Los Angeles MP 5.85								
S. Vail Avenue	2	9,200	49.6	130.9	28.4	12.6	0.4	No
Maple Avenue	2	6,480	49.6	130.9	18.5	11.2	0.4	No
S. Greenwood Avenue	4	8,490	49.6	131.3	22.9	10.3	0.4	No
Montebello Boulevard	4	23,960	49.6	131.3	81.5	14.4	0.5	No
Durfee Avenue	2	16,270	49.6	88.8	29.2	8.3	0.3	No
Rose Hills Road	4	11,010	49.6	84.5	12.3	4.4	0.1	No
Mission Mill Road	2	2,540	49.6	84.3	2.6	3.9	0.1	No
Workman Mill	4	8,920	49.6	84.5	9.7	4.2	0.1	No
Turnbull Canyon Road	4	16,840	49.6	84.5	20.4	4.9	0.2	No
Stimson Avenue & Puente Avenue	4	17,160	49.6	84.5	20.9	5.0	0.2	No
Bixby Drive	2	3,460	49.6	84.3	3.6	4.0	0.1	No
Fullerton Road	4	28,250	49.6	84.5	41.7	6.6	0.2	No
Nogales Street	6	43,970	49.6	84.7	66.6	6.8	0.2	No
Fairway Drive	4	29,540	49.6	84.5	44.7	6.8	0.2	No
Lemon Street	4	17,550	49.6	84.5	21.5	5.0	0.2	No
Pomona Junction MP 31.9	**HANDLED SEPARATELY DUE TO PROXIMITY TO UP ALHAMBRA SUBDIVSION**							
LA-San Bernardino County Line MP 33.17								
E. Montclair Junction MP 35.02								
Bonview Avenue	2	5,370	55.0	98.6	7.3	5.3	0.1	No
Grove Avenue	6	60,910	55.0	99.1	158.0	13.4	0.3	No
Vineyard Avenue	4	6,870	55.0	98.8	8.9	5.0	0.1	No
Archibald Avenue	4	8,120	55.0	98.8	10.7	5.1	0.1	No

Table 4-14: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2038 with Proposed Project Scenario (Excluding Segment that Is Combined with UP Alhambra Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles / Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
San Bernardino-Riverside County Line MP 43.36								
Milliken Avenue	6	34,110	55.0	99.1	55.8	6.9	0.2	No
Mira Loma Junction MP 45.7								
Bellegrave Avenue	2	12,540	60.0	106.8	22.6	7.8	0.2	No
Rutile Street	2	13,470	60.0	106.8	25.2	8.2	0.2	No
Clay Street	4	21,970	60.0	106.8	63.7	15.3	0.3	No
Mountain View Avenue	2	2,800	60.0	127.9	5.5	7.4	0.2	No
Streeter Avenue	4	22,560	60.0	128.3	56.9	10.6	0.2	No
Palm Avenue	2	12,200	60.0	119.6	27.5	9.6	0.2	No
Brockton Avenue	4	21,740	60.0	128.3	54.1	10.4	0.2	No
Riverside Avenue	2	18,710	60.0	127.9	64.5	16.7	0.4	No
Panorama Road	2	10,390	60.0	127.9	25.3	10.1	0.2	No
West Riverside Junction MP 56.7								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**1,010.4**			
Maximum P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						**16.7**		

1

Table 4-15: Combined UP Alhambra and LA Subdivisions in Pomona and Montclair Area, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Pomona Junction MP 514.3								
Hamilton Boulevard	4	9,320	116.7	234.0	31.5	12.9	0.3	No
Park Avenue	2	6,590	116.7	233.5	23.4	13.9	0.3	No
Main Street	2	1,830	116.7	233.5	5.7	11.6	0.2	No
Palomares Street	2	4,500	116.7	233.5	15.1	12.8	0.3	No
San Antonio Avenue	4	8,010	116.7	234.0	26.6	12.6	0.3	No
LA-San Bernardino County Line MP 516.7								
Monte Vista Avenue	4	18,940	116.7	234.0	73.5	15.8	0.3	No
San Antonio Avenue	4	16,030	116.7	234.0	59.4	14.8	0.3	No
Vine Avenue	2	11,770	116.7	233.5	49.3	17.6	0.4	No
Sultana Avenue	2	17,530	116.7	233.5	94.1	25.0	0.6	No
Campus Avenue	2	16,460	116.7	233.5	83.8	23.2	0.5	No
Montclair Junction								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**462.5**			
Maximum P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						**25.0**		

1

2

Table 4-16: UP Yuma Subdivision from Colton Crossing to Indio, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Colton Crossing MP 539.0								
Hunts Lane	4	21,770	93.9	230.9	102.8	19.6	0.4	No
Whittier Avenue	2	320	93.9	273.8	1.6	17.6	0.4	No
Beaumont Avenue	2	750	93.9	273.8	3.7	17.9	0.4	No
San Timoteo Canyon Road	2	18,760	93.9	273.8	182.9	47.5	1.0	No
Alessandro Road	2	470	93.9	273.8	2.3	17.7	0.4	No
San Bernardino-Riverside County Line MP 549.25								
Live Oak Canyon Road	2	1,760	93.9	273.8	8.8	18.4	0.4	No
San Timoteo Canyon Road	2	2,300	93.9	273.8	11.7	18.7	0.4	No
Viele Avenue	2	170	93.9	230.4	0.6	12.4	0.3	No
California Avenue	2	10,590	93.9	230.4	46.7	17.7	0.4	No
Pennsylvania Avenue	2	13,120	93.9	230.4	62.5	19.8	0.4	No
North Sunset Avenue	2	6,110	93.9	230.4	23.9	14.9	0.3	No
22nd Street	4	24,800	93.9	230.9	116.0	19.2	0.4	No
San Gorgonio Avenue	2	20,530	93.9	230.4	131.2	30.0	0.7	No
Hargrave Street	2	26,700	93.9	230.4	249.5	51.4	1.2	No
Apache Trail	2	4,050	93.9	230.4	15.1	13.9	0.3	No
Broadway	2	10,690	93.9	230.4	47.3	17.8	0.4	No
Tipton Road	2	180	93.9	230.4	0.6	12.4	0.3	No
Garnet MP 588.32								

Table 4-16: UP Yuma Subdivision from Colton Crossing to Indio, 2038 with Proposed Project Scenario

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/ Day)	Average Daily Train Volume (Trains/ Day)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/ Vehicle)	2038 Cumulative Baseline vs. 2038 with proposed Project P.M. Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
West Indio MP 609.63								
Indio MP 610.9								
Avenue 52	4	17,600	93.9	230.9	74.1	16.5	0.4	No
Avenue 56/Airport Boulevard	2	7,670	93.9	230.4	31.2	15.8	0.3	No
Avenue 66/4th Street	2	12,570	93.9	230.4	58.9	19.3	0.4	No
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**1,171.3**			
Maximum P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						**51.4**		

1

Contribution of the Alternatives

Since the incremental impacts of the Alternatives 1 through 4 are lower than that of the proposed Project and the incremental impact of Alternative 5 is the same as the proposed Project, Alternative 1 through 5would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Because potential vehicle delay impacts at mainline at-grade railroad crossings beyond these geographical limits fall outside of the area of federal control and responsibility and scope of analysis, there are no direct or indirect impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.6.8 Cumulative Impact TRANS-6: The proposed Project would not contribute to a cumulatively substantial increase in transportation hazards due to a design feature—No Cumulatively Impact

Cumulative Impact TRANS-6 represents the potential of the proposed Project along with other cumulative projects to result in a substantial increase in transportation hazards due to a design feature.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present and future projects that affect the transportation system would continue to be subject to permit by the City, and are subject to review and approval by the City's Department of Transportation (or other applicable transportation planning agency if outside the City of Los Angeles' jurisdiction. These reviews ensure that transportation improvements comply with current standards and meet safety requirements. Therefore, the related projects would not result in a significant cumulative impact related to transportation hazards.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.6, the proposed Project would follow the City of Los Angeles' street vacation procedures for the vacation of Terminal Way west of Earle Street and Barracuda Street north of Cannery Street. Further, all applicable engineering and design requirements would followed by the Harbor Department in any project-related roadway modifications. Therefore, the proposed Project wound not substantially increase transportation hazards due to a design feature and cause impacts under CEQA. There are no other cumulative projects that are expected to affect transportation design features or increase transportation hazards. Consequently, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and neither would Alternatives 1, and 3 through 5 under NEPA related to public transit use. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.7 Groundwater and Soils

4.2.7.1 Scope of Analysis

The geographic scope for cumulative impacts on groundwater and soils varies, depending on the impact. The geographic scope with respect to contaminated soils and groundwater is confined to the Project site and immediate vicinity because these impacts would be site-specific and relate primarily to potential exposure of on-site personnel to contaminants during construction and operation of the proposed Project or an alternative.

Past, present, and reasonably foreseeable future developments that could contribute to cumulative impacts associated with groundwater and soils under CEQA are limited to projects that would result in paving and potential reduction in groundwater recharge. With respect to NEPA, there are no off-site past, present, planned, and reasonably foreseeable future development that could contribute to cumulative impacts associated with groundwater and soils. NEPA-related soil impacts would be limited to potentially encountering onshore contaminated soil at the onshore/in-water interface, during excavations, and during construction of backlands that are not included in the NEPA baseline (refer to Section 2.6.2); however, such impacts do not extend beyond individual project boundaries.

The cumulative area of influence is predominantly underlain by a shallow, unconfined aquifer (non-potable) (with an overlying shallow, perched, water-bearing zone of saline, non-potable water), which has historically occurred at depths as shallow as five feet below ground surface. This shallow aquifer is underlain by several major water-bearing zones. Spills of petroleum products and hazardous substances, due to long-term industrial land use, have resulted in contamination of some surface soils and shallow groundwater. Most of the cumulative area of influence has been disturbed in the past and much of it is covered in impervious surfaces.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project and alternatives in Section 3.7. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.7.2 Cumulative Impact GW-1: The proposed Project would not contribute to cumulatively considerable exposure of soils containing toxic substances and/or petroleum hydrocarbons, associated with prior uses, which would be deleterious to humans, based on regulatory standards established by the lead agency for the site—Less than Cumulatively Considerable

Cumulative Impact GW-1 addresses the degree to which the proposed Project along with other cumulative projects could result in exposing soils containing toxic substances and petroleum hydrocarbons associated with prior operations, which would be deleterious to humans. Exposure to contaminants associated with historical uses of the Project site could result in short-term effects (duration of construction) to construction workers, on-site personnel, and/or long-term impacts to future site occupants. The cumulative geographic scope includes the proposed Project and immediate area because the effects of soil contamination are generally site-specific and consist primarily of the potential to expose on-site personnel to contaminants during construction or subsequent to construction.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As discussed in Section 3.7.2.3, soil and groundwater at the Project site have been impacted by waste materials, hazardous substances, and petroleum products as a result of spills and industrial activities associated with historic land uses of the site including past leaks from the fuel oil tanks at the former Canner's Steam Company Plant. As described above, the effects of soil contamination and groundwater are generally site-specific and thus not subject to Port-wide cumulative effects. Therefore, the related projects listed in Table 4.1 would not result in a significant cumulative impact related to exposing soil contamination.

Contribution of the Proposed Project (Prior to Mitigation)

Soil and groundwater at the Project site have been impacted by waste materials, hazardous substances, and petroleum products as a result of spills and industrial activities associated with historic land uses of the site. Improvements to the existing terminal, including electrical infrastructure and utilities, would either not expose subsurface areas or would occur at relatively shallow depths in areas where contamination has not been reported or documented, or in locations where soil contamination has been remediated. Because of this, improvements to the existing terminal are not expected to expose persons to soil or groundwater contaminants.

The backland improvements are not expected to encounter contaminated soil or groundwater from past leaks from the fuel oil tanks at the former Canner's Steam Company Plant because the contaminated soil has been delineated and remediated, groundwater contamination has been largely remediated, and these excavations would not reach groundwater depths. However, there may be a limited number of infrastructure improvements that could extend into the groundwater zone, and unanticipated discovery of contaminated materials during construction could still result in exposure of workers and the public to such contaminants. With compliance with applicable regulatory

agencies (e.g., LARWQCB, and/or DTSC), excavation, transport, and treated (or disposed of) any encountered contaminated soils that might be encountered at the Project site would be addressed and impacts would be less than significant. Impacts would be less than significant under CEQA and NEPA. As described above, impacts associated with soil contamination are site-specific, and thus the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to exposing soil contamination. Alternative 1 would result in no impacts under NEPA, and Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

No proposed Project-level impacts are anticipated during construction with compliance with applicable requirements and regulations governing use and handling of hazardous materials. Therefore, no mitigation measures would be required and the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.7.3 Cumulative Impact GW-2: The proposed Project would not result in cumulatively considerable changes in the rate or direction of movement of existing contaminants; expansion of the area affected by contaminants; or increased level of solid or groundwater contamination, which would increase risk of harm to humans—Less than Cumulatively Considerable

Cumulative Impact GW-2 addresses the degree to which the proposed Project along with other cumulative projects could change the rate or direction of movement of existing contaminants; expansion of the area affected by contaminants; or increased level of groundwater contamination, which would increase the risk of harm to humans. A portion of the Project site are backlands that would be improved as part of the Project and would effectively serve as an impermeable surface barrier above any contamination zone and would prevent runoff from percolating through contamination and affecting groundwater. The cumulative geographic scope is the Project site and immediate vicinity, because the effects of soil and groundwater contamination are site-specific in that they relate primarily to potential exposure of contaminants to on-site personnel during construction, or to on-site personnel subsequent to construction.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past uses that have contributed to soil and/or groundwater contamination at the Project site have been identified, as discussed in Section 3.7.2.3, and include soil and

groundwater contamination associated with the former Canners Stream Company Plant, and hydrocarbons from the existing PBF Energy terminal (formerly Exxon Mobile terminal) immediately south of the Project site. Many of the present and reasonably foreseeable future projects would not have an adverse additive effect on soil contamination on site because these projects would be located far enough from the Project site that their improvements would not affect groundwater at the Project site. Other related projects in the Project vicinity on Terminal Island, such as YTI (#4) and PFB Energy (#35), would result in improvements that remediate existing contamination on their respective project sites, which reduces sources of contamination within the Port, and in particular on Terminal island. Consequently, the related projects would not result in significant cumulative impacts relative to the expansion of the area affected by movement, expansion, or increase in existing contaminants.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Section 3.7, the proposed Project would not be expected to change the rate, direction, or extent of existing soil and/or groundwater contamination due to the placement of an impermeable surface layer over the Project site. Furthermore, as discussed for Impact GW-1, should any contaminated soil or groundwater be encountered during construction, it would be remediated in compliance with federal, state, and local requirements. Further, increased impervious surfaces in the backland expansion areas relative to existing conditions would have the effect of lessening infiltration through contamination (if present), which is considered a beneficial effect. Because the contribution from the proposed Project would potentially lessen the effects of contamination movement, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact (from past uses at the Project site) under both CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to the movement or expansion of contamination. Alternative 2 is not required to be analyzed under NEPA, and Alternative 1 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

The proposed Project would not be expected to change the rate, direction, or extent of existing soil and/or groundwater contamination due to the placement of an impermeable surface layer over the Project site. Further, increased impervious surfaces in the backland expansion areas relative to existing conditions would have the effect of lessening infiltration through contamination (if present), which is considered a beneficial effect. As such, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.8 Hazards and Hazardous Materials

4.2.8.1 Scope of Analysis

The geographic scope for cumulative impacts associated with accidental spills, releases, or explosions of hazardous materials encompasses the overall Port Complex. The importance of regional projects diminishes as distance away from the Port Complex increases because the magnitude of potential impacts diminishes with greater distance from the Port Complex. Thus, past, present, and reasonably foreseeable future projects that could contribute to these cumulative impacts include those projects that transport hazardous materials in the vicinity of the Port Complex.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project and alternatives in Section 3.8. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.8.2 Cumulative Impact RISK-1: The proposed Project would not result in a cumulatively considerable or a measurable increase in the probability of a terrorist action and would not result in adverse consequences to the Project site and nearby areas—Less than Cumulatively Considerable

Cumulative Impact RISK-1 represents the potential of the proposed Project along with other cumulative projects to increase the risk that a potential terrorist action would result in adverse consequences to areas near the Project site.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Potential impacts due to terrorism are characteristic of the entire Los Angeles and Long Beach metropolitan area. Terrorism risk can be based on simple population-based metrics (i.e., population density) or event-based models (i.e., specific attack scenarios). Willis et al. (2005) evaluated the relative merits and deficiencies of these two approaches to estimating terrorism risk, and outlined hybrid approaches of these methods. Overall, the results of the terrorism risk analysis characterized the Los Angeles/Long Beach metropolitan area as one of the highest-risk regions in the country. Using population metrics, the Los Angeles/Long Beach region was ranked either first or second in the country, while the event-based model dropped the Los Angeles/Long Beach region to the fifth ranked metropolitan area, mainly due to the relative lack of attractive, high-profile targets (i.e., national landmarks or high profile, densely populated buildings). Using various approaches and metrics, the Los Angeles/Long Beach region represented between 4 percent and 11 percent of the U.S. terrorism risk.

Historical experience provides little guidance in estimating the probability of a terrorist action on a container vessel or onshore terminal facility. For a container terminal importing large numbers of containers from countries that may be considered unfriendly, the perceived threat of a terrorist action is a primary concern of the local population. Sinking a cargo ship in order to block a strategic lane of commerce actually presents a relatively low risk, in large part because the targeting of such attacks is inconsistent with the primary motivation for most terrorist groups (i.e., achieving maximum public

attention through inflicted loss of life). Sinking of a ship would likely cause greater environmental damage due to spilled fuel, but this is generally not a goal of terrorist groups.

However, at the national level, potential terrorist targets are plentiful, including those having national significance, those with a large concentration of the public (e.g., major sporting events, mass transit, skyscrapers), or critical infrastructure facilities. Currently, the United States has more than 500 chemical facilities operating near large populations. United States waterways also transport more than 100,000 annual shipments of hazardous marine cargo, including LPG, ammonia, and other volatile chemicals. All of these substances pose hazards that far exceed those associated with a container terminal.

The Port of Los Angeles is one of the world's largest trade gateways, and the economic contributions to the regional and national economy are substantial. As discussed in Chapter 1, cumulative container throughput continues to grow in importance on a national level, and the Port Complex already represents a substantial fraction of national container terminal throughput and, by default, an attractive economic terrorist target. Given the relative importance of the Port Complex under baseline conditions, cumulative growth would not be expected to materially change the relative importance as a potential terrorist target.

Intermodal cargo containers could also be used to transport a harmful device into the Port Complex intended to cause harm to the Ports. This could include a weapon of mass destruction or a conventional explosive. The likelihood of such an attack would be based on the motivation to cause harm to the port, with potential increases in cumulative Port Complex infrastructure or throughput having no measurable effect on the probability of an attack. Additionally, the use of cargo containers to smuggle weapons of mass destruction through the Port Complex intended to harm another location such as a highly populated and/or economically important region is another possible use of a container by a terrorist organization. The consequences associated with the smuggling of a terrorist weapon would depend, in part, on the nature of the device or material, but could be substantial in terms of impacts to the environment and public health and safety, especially if it were a mass destruction device. However, the consequences of a weapon of mass destruction attack would not be affected by cumulative growth at the Port Complex; rather, the consequences would depend on the composition and type of device or material, how a terrorist intends to use the device, and to what aim he or she intends to accomplish, the time of day, the surrounding population or property density, or any number of other non-Port throughput- related factors. Cargo containers represent only one of many potential methods to smuggle weapons of mass destruction, and with current security initiatives may be less desirable than other established smuggling routes (i.e., land-based ports of entry, cross border tunnels, and illegal vessel transportation).

Because there are no measurable and/or definitive links between container throughput and the consequences of a terrorist action, and because many factors other than container throughput would be the likely or primary motivations that would dictate the probability and consequences of a terrorist action, the throughput increases at the Port associated with the related projects would not result in a significant cumulative impact related to an increased probability of a terrorist action.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.8.3.3, the proposed Project would not result in a significant impact related to an increase in the probability of a terrorist action. The Project site is an existing container terminal and would not constitute a new potential target for terrorists. Further, the likelihood of such an event would not be based on proposed Project-related throughput, but rather would be based on the intent of the terrorist and his/her motivation. It is possible that the increase in vessel traffic at the terminal as a result of the proposed Project could lead to a greater opportunity of a successful terrorist attack by providing increased chances for unauthorized terminal access and smuggling of harmful devices into the terminal; however, existing Port security measures as described below would counter the potential for increase in unauthorized access to the terminal.

Existing Port and Everport Container Terminal security measures would help minimize the risk of a successful terrorist attack and counter any potential increase in unauthorized access to the terminal. The Port has a layered approach to security that includes the security program of LAHD and the existing Project site. The vulnerability of the Port and of individual cargo terminals, including the Everport Container Terminal, can be reduced by implementing security measures, and the potential consequences of a terrorist action could be affected by certain measures, such as emergency response preparations. Compliance with maritime security regulations including the MTSA and ISPS Code would minimize any potential increase in the risk of terrorist attacks during construction and operations of the proposed Project. The Everport Container Terminal's Facility Security Plan was approved by the Captain of the Port for Sector Los Angeles-Long Beach in 2003 and audited again in 2015. In addition, Everport Container Terminal uses mandatory Maritime Security (MARSEC) Access Control Measures. Further, all cargo vessels 300 gross tons or larger that are flagged by International Maritime Organization signatory nations adhere to ISPS code requirements as discussed above and detailed in Section 3.8.1.2. LAHD currently implements the TWIC program, which includes issuance of a tamper-resistant biometric credential to maritime workers to minimize the potential for unauthorized handling of containers and provide additional shoreside security at the terminal. The U.S. CBP enforces screening and scanning checks to ensure security of cargo being shipped into the U.S. Further, LAHD continues to improve Port security measures. For instance, in its latest update to its five-year Strategic Plan for 2012–2017 (POLA, 2014), LAHD describes an initiative related to strengthening security measures, and maximizing the Port's ability to respond to incidents, should they occur. Implementation and enforcement of the above security measures would serve to counter any potential increase in risks of a terrorist attack at the Everport Container Terminal.

Based on the security measured described here, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternatives 3 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to an increase in the probability of a terrorist action. Alternative 1 would result in no impacts under NEPA and Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.9 Marine Transportation

4.2.9.1 Scope of Analysis

The proposed Project would allow a greater number of container vessels to call at the Project site, including larger vessels that could be accommodated at deepened berths (i.e., Berths 226–229 and Berths 230–232). Like all commercial vessels, these ships would follow designated traffic channels (also used by other vessels) when approaching and leaving the Harbor (see Figure 3.9-1). Moreover, dredging and in-water/over-water construction activities associated with the proposed Project would occur within the Main Channel, an existing federal channel at the Port. Because the proposed Project has the capacity to affect vessel transportation within these channels only and the berths that the vessels are accessing, the region of analysis for cumulative marine transportation impacts includes the vessel traffic channels that ships use to access berths within the Main Channel, East Basin Channel, and the Precautionary Area.

The cumulative impacts include those impacts from past, present, and reasonably foreseeable future projects that would also increase the number and size of vessels using these shipping lanes.

4.2.9.2 Cumulative Impact VT-1: Proposed Project construction- and operation-related marine traffic would not result in a cumulatively considerable impact related to interference with the operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area—Less than Cumulatively Considerable

Cumulative Impact VT-1 represents the potential of the proposed Project along with other cumulative projects to increase traffic congestion or reduce the existing level of safety for vessels navigating the Main Channel and/or Precautionary Areas. This includes construction and operation phase impacts.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past actions within the proposed Project vicinity have resulted in deepening navigation channels and upgrading existing wharf infrastructure to accommodate modern container ships. Incremental Port development has resulted in water-dependent developments that have been necessary to accommodate the needs of foreign and domestic waterborne commerce.

Present and reasonably foreseeable Port projects, including the other terminal projects, could result in marine vessel safety impacts if they introduce construction equipment and

additional vessels to the Main Channel, harbor, and Precautionary Area that interferes with USCG designated vessel traffic lanes. In-water/over-water construction activities and vessel operations associated with the marine-based related projects listed in Table 4-1 include TraPac (#2), YTI (#4), China Shipping (#7), Yang Ming (#14), Valero (#1), Shell (#31), PBF Energy (#35), and APL (#26).

With the exception of the APL Container Terminal (#26), the majority of the related projects involving in-water/over-water construction and operational vessel traffic would be located the Inner Harbor at the West Basin and Turning Basin and along the Main Channel. As described in Section 3.9.2.1, vessel traffic levels are highly regulated by the USCG Captain of the Port (COTP) and the Marine Exchange of Southern California via the VTS to ensure the total number of vessels transiting the Port does not exceed the design capacity of the federal channels. Regulated navigation areas (RNAs) and routes have been designated to ensure safe vessel navigation, and are regulated by various agencies and organizations to ensure navigational safety. Mariners are required to report their position to the VTS prior to transiting through the Port; the VTS monitors the positions of all inbound/outbound vessels within the Precautionary Area and the approach corridor traffic lanes. In the event of scheduling conflicts and/or vessel occupancy when the Port is operating at capacity, vessels are required to anchor at the anchorages outside the Federal Breakwater until mariners receive COTP authorization to initiate transit into the Port. Vessels must also adhere to the Harbor Safety Plan (HSP) speed limit regulations and the limited-visibility guidelines. Additionally, Port Tariffs requiring the use of Los Angeles Port Pilots for all vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board, further ensures that vessels are safely transited within the harbor.

In addition to the standard operational procedures, LAHD requires standard measures stipulated in all LAHD contracts and USACE permits, including navigational hazard markings. In addition, construction projects must comply with USCG navigation rules that include providing the USCG with a dredging schedule in advance of construction. Compliance with standard safety measures and requirements would preclude construction from blocking navigation channels or creating circumstances that could result in substantial navigation hazards.

Therefore, with the continued implementation of the VTS, oversight by the COTP and Marine Exchange, and use of Port Pilots, as well as standard measures implemented during in-water and over-water construction and dredging, impacts from past, present, and reasonably foreseeable related projects would not be expected to result in significant cumulative impacts related to navigation hazards.

Contribution of the Proposed Project (Prior to Mitigation)

The construction phase of the proposed Project would involve the use of construction vessels and equipment to conduct dredging, crane installation, and wharf improvement activities within the Main Channel. In-water/over-water construction activities are routinely conducted in the Port and contractors performing in-water/over-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and USACE permits as described above. Because standard safety precautions would be utilized by all contractors, the use of a general cargo ship to deliver crane equipment, derrick barges for pile driving and dredging, and dump scows for

moving dredge material would not substantially affect marine vessel safety in the Main channel, and connected basin areas.

In the operation phase, the cumulative increase in Port cargo volume and vessel calls from the proposed Project in combination with reasonably foreseeable future Port development of the related projects listed in Table 4-1would result in additional vessel traffic in the Precautionary Area, outer harbor, inner harbor, and Main Channel. Consequently, the proposed Project in combination with future Port development could potentially increase the risk of in-water vessel traffic hazards; however, continued implementation of the VTS, oversight by the COTP and Marine Exchange, adherence to the HSP speed limit regulations, adherence to limited-visibility guidelines, and use of Port Pilots would ensure navigational hazards would not occur.

Therefore, neither construction nor operation of the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact relative to vessel traffic or navigational safety under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to vessel traffic or navigational safety, and Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to vessel traffic or navigational safety, and Alternative 1 would result in no impacts under NEPA, and Alternative 2 is a CEQA-required alternative and is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative marine transportation impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.10 Noise

4.2.10.1 Scope of Analysis

For the purposes of cumulative noise impact analysis, the area of influence includes those sensitive receptors closest to the Project site, which might potentially be affected by construction noise or noise associated with traffic generated by the proposed Project or an alternative, and sensitive receptors along major transportation corridors serving the proposed Project area. The nearest residential area to the pile driving locations at the Project site is located in San Pedro, about 0.3 mile to the west, across the Main Channel of the Los Angeles Harbor as shown on Figure 3.10-1. There are also liveaboards in Fish Harbor and on the north side of the Cerritos Channel just west of the Terminal Island Freeway (State Route 47) Bridge. When considering the cumulative impacts resulting from the interaction of the noise due to the proposed Project in combination with noise that originates from other projects that would be taking place in the vicinity of the proposed Project, not all of the other projects are close enough to make an impact, so they can be ruled out from further consideration. The noise level that results from distant projects is diminished by geometric spreading and ground attenuation. Other factors such

as line of sight obstructions and louder and closer noise sources may also further diminish the noise impacts associated with these other projects. Projects are considered to be too far away when the impacts that they would have on the cumulative noise level are too small to cause a significant increase in the cumulative noise level.

This analysis assesses the potential of the proposed Project along with other cumulative projects to cause a substantial increase in noise as a result of proposed Project construction activities and operational activities (including on-site operations, increased traffic noise, and increased railroad noise).

4.2.10.2 Cumulative Impact NOI-1: Construction activities lasting more than 10 days in a 3-month period would result in a cumulatively considerable exceedance in existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors—Cumulatively Considerable and Unavoidable

Cumulative Impact NOI-1 represents the potential for construction activities of the proposed Project along with other cumulative projects to cause a substantial increase in ambient noise levels at sensitive receivers within the cumulative geographic scope.

A cumulative construction noise impact would be identified if construction activities necessary to implement the proposed Project in combination with one or more of the related and cumulative projects would cause a substantial short-term increase in noise at a sensitive receptor, and the project contribution would be considered cumulatively considerable. A substantial increase is defined to be a 5-dBA increase during any daytime hour when construction activities would occur (Section 3.10.3.1). Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receptor, a cumulatively considerable impact would result.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The proposed Project would be constructed over approximately 24-months, and the earliest construction could start is in fourth quarter 2017. The list of related and cumulative projects was reviewed to determine if construction activities associated with any of these projects could, in combination with the proposed Project, cause a cumulative construction noise impact on sensitive receptors that would have a temporary increase in ambient noise levels at nearby sensitive receptors during construction of the proposed Project (such as residents to the west across the Main Channel, liveaboards at a marina in Fish Harbor and tourist receptors at the waterfront area in San Pedro).

In the vicinity of the nearby liveaboard boat area, and residences and tourist area to the west, projects that could have construction activities concurrently with the proposed Project and would result in potential noise impacts on sensitive receptors include other construction projects that involve pile driving, such as Valero (#1) and Shell (#31), because pile driving generate the loudest noises. Although these related projects would have concurrent construction as the proposed Project, they are located over 2,000 feet from the Project site (the Shell terminal is located 2,100 feet north of the Project site, and the Valero terminal is located approximately 3,300 feet to the northeast). The nearest residential receptor to both the Valero Terminal and Shell Terminal pile driving locations

is the apartment complex located at 661 Harbor Blvd. This apartment is the same receptor as ST-8 described in Section 3.10. It is likely that construction activities and associated noise levels of these related projects would be similar to those expected from the equipment necessary to construct the proposed Project elements. It also is likely that the other related projects would result in significant cumulative noise impacts at some sensitive locations due to concurrent pile driving construction.

Contribution of the Proposed Project (Prior to Mitigation)

Pile driving during wharf construction alone or pile driving in combination with general construction has been identified as having a significant impact under NEPA and CEQA at liveaboard boats in Fish Harbor and at the San Pedro Waterfront. In addition, other receptors that are farther from the Project site but closer to the Shell terminal and Valero terminal, could also be affected, as described above. Therefore, during pile driving, the proposed Project would have a cumulatively considerable noise impact when combined with any other related project that would affect the same receptor locations and occur concurrently with the proposed Project.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 3 through 5, which also include pile driving, would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to causing an increase average ambient noise levels at Fish Harbor and San Pedro waterfront by 5 or more dBA over existing levels.

Should construction of other related projects in the vicinity occur concurrently, construction activities could make a cumulatively considerable contribution to a significant cumulative impact at the liveaboard in Fish Harbor and the San Pedro Waterfront and other sensitive noise receptors in the vicinity. Therefore, for the same reasons as described for the proposed Project, Alternatives 3 through 5 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to construction noise.

Alternative 1 would involve construction of additional backlands but would not include dredging, dredged material disposal, in-water pile installation, or new crane installation, would not exceed the Project-level noise thresholds as a sensitive receptor, and thus would not be expected to contribute to cumulatively considerable noise impacts at nearby liveaboards or the San Pedro Waterfront under CEQA. Alternative 2 would not involve any construction activities; therefore, there would be no potential for cumulative construction impacts under CEQA. Alternative 1 would result in no impacts under NEPA and Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation measure MM NOI-1, which requires the contractor to use a pile driving system capable of limiting maximum noise levels at 50 feet from the pile driver to 104 dBA, would help reduce the maximum noise levels during pile driving. Mitigation measure MM NOI-2, which would require installation of temporary noise attenuation curtains suitable for pile driving equipment, would further reduce construction noise. Even with implementation of mitigation measures MM NOI-1 and MM NOI-2, the

proposed Project and Alternatives 3 through 5 could make a cumulatively considerable contribution to a significant cumulative impact related to noise.

4.2.10.3 Cumulative Impact NOI-2: Noise levels from cumulative construction activities would not result in a cumulatively considerable exceedance in the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. or after 6:00 P.M. on Saturday, or at any time on Sunday—Less than Cumulatively Considerable

Cumulative Impact NOI-2 represents the potential for nighttime construction activities of the proposed Project along with other related projects to cause a substantial increase in ambient noise levels at sensitive receivers within the cumulative geographic scope.

A cumulative construction noise impact would be assessed if nighttime construction activities necessary to implement the proposed Project in combination with one or more of the related and cumulative projects would cause a substantial short-term increase in noise at a sensitive receptor, and the project contribution would be considered cumulatively considerable. A substantial increase is defined to be a 5-dBA increase during any nighttime hour and anytime on Sunday when construction activities would occur (Section 3.10.3.1). Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receptor, a cumulatively considerable impact would result.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The list of related and cumulative projects was reviewed to determine if construction activities associated with any of these projects could, in combination with the proposed Project, cause cumulative nighttime construction noise impact on sensitive receptors (i.e., liveaboards or tourism area) that would have a temporary increase in ambient noise levels during construction of the proposed Project.

In the vicinity of the Fish Harbor liveaboard boat area, the only project that may involve nighttime construction activities and could occur concurrently with the proposed Project is the Yang Ming (#14), which could include dredging that could occur at night. However, the dredging activities for the Yang Ming Project would be located over 9,900 feet away from the the Fish Harbor liveaboards, whereas the project dredging location is approximately 3,900 feet away. As described in Table 3.10-10, nighttime dredging under the proposed Project would not result in an increase in ambient noise levels at the Fish Harbor liveaboard boat area. Therefore, dredge noise from the Yang Ming project that is located over twice the distance would not result in increases in noise levels at the Fish Harbor liveaboard boat area. Similarly. the nearest residential area to the dredging zone at the Project site is located approximately 1,600 feet west to the west, and dredging would not result in elevated noise levels at this location (LT-3; see Table 3.10-10). The Yang Ming dredge location is approximately 7,000 feet away, and since this distance is greater than the proposed Project, it would also no result in elevated noise levels at this location. As a consequence, the concurrent nighttime construction would not result in a significant cumulative noise impact.

Contribution of the Proposed Project (Prior to Mitigation)

The Project would include dredging activities for 24 hours per day, which is the proposed Project's only construction activity that would occur during nighttime hours. With the exception of dredging, the proposed Project would follow the construction hours of the City of Los Angeles Noise Ordinance. These berths are more than 0.3 mile (1,600 feet) from the nearest sensitive receptor (San Pedro Waterfront residential area) and, accordingly, no construction activities within 500 feet of a residential zone would occur between the hours of 9 P.M. and 7 A.M. Monday through Friday, before 8 A.M. or after 6 P.M. on Saturday, or at any time on Sunday. Night construction during dredging would not result in average noise levels exceeding the ambient levels at sensitive receptors (see Table 3.10-9 in Section 3.10); thus, it would not exceed the significance criteria for the area.

Given that the proposed Project would not result in a noise increase in ambient nighttime noise levels at the sensitive receptor locations and significant cumulative nighttime noise impacts would not occur, the proposed Project would not be expected to make a cumulatively considerable contribution to a significant cumulative impact relative to nighttime construction noise.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to nighttime construction noise. Alternatives 1 and 2 would not involve nighttime construction and thus would have no impact under CEQA. Alternative 1 would result in no impacts under NEPA, and Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and any of its alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

4.2.10.4 Cumulative Impact NOI-3: The operation of the proposed Project would not result in a cumulatively considerable exceedance of existing ambient noise levels at the noise sensitive receptors by a CNEL of 3 dBA within 'normally unacceptable' or 'clearly unacceptable' land use categories, or by a CNEL of 5 dBA or greater at noise-sensitive receptors in 'normally acceptable' land use categories—Less than Cumulatively Considerable

Cumulative Impact NOI-3 represents the potential of the proposed Project along with other cumulative projects to cause a substantial permanent increase in ambient noise levels at sensitive receptors within the geographic scope of the proposed Project.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

On-site operations at the Port Complex and roadway traffic on the roadway network along major roadways in the study area including SR-47, Vincent Thomas Bridge, Schuyler Heim Bridge, Harry Ford Bridge, and other streets in the Wilmington and San Pedro areas are the dominant sources of community noise at noise sensitive receptors within the geographic scope of the proposed Project. Virtually all of the cumulative projects in Table 4-1, along with general background growth, would contribute to existing noise sources such as traffic, rail operations, and therefore significant cumulative noise impacts would occur.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would not generate operational noise levels at the terminal that results in an exceedance of existing ambient noise levels at sensitive receivers by 3 dBA CNEL with ambient noise levels under normally acceptable and conditionally acceptable conditions.

Noise increases associated with on-site terminal operations and increases in container shipments to and from the Port via area rail and roadway corridors, along with increased workforce automobile traffic on area roadways, would increase noise levels at adjacent noise sensitive uses that are within 'normally unacceptable' or 'clearly unacceptable ' land use categories, but the increases would be less than 3 dBA, and CNEL noise level increases at adjacent noise sensitive uses that are within 'normally acceptable' land use categories would not increase by more than 5 dBA. Therefore, the proposed Project would not make a cumulatively considerable contribution to significant on-site noise impacts at any of the noise sensitive areas under both CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, and because these alternatives would have less or the same throughput as the proposed Project, Alternatives 3 through 5 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA related to operational noise levels. Alternatives 1 and 2 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to operational noise levels. Alternative 1 would result in no impacts under NEPA, and Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and alternatives would not contribute a cumulatively considerable impact under CEQA and NEPA.

4.2.11 Water Quality, Sediments, and Oceanography

4.2.11.1 Scope of Analysis

The geographic scope of analysis for cumulative impacts to water and sediment quality is the Los Angeles and Long Beach Harbor (Inner and Outer Harbor areas), as these areas represent the receiving waters for all cumulative projects considered.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project and alternatives in Section 3.11.4. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.11.2 Cumulative Impact WQ-1: The proposed Project would not contribute to a cumulatively considerable creation of pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or causing regulatory standards to be violated in Harbor waters—Less than Cumulatively Considerable

Cumulative Impact WQ-1 represents the potential of the proposed Project along with other cumulative projects to create pollution, cause nuisances, or violate applicable standards.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Water and sediment quality within the geographic scope are affected by activities within the Harbor (i.e., shipping, wastewater discharges from the TIWRP, inputs from the watershed including aerial deposition of particulate pollutants, and effects from historical [legacy] inputs to the Harbor). As discussed in Section 3.11, portions of the Los Angeles and Long Beach Harbor are identified on the current Section 303(d) list as impaired for a variety of chemical and bacteriological stressors and effects to biological communities. For those stressors causing water quality impairments, the Los Angeles RWQCB amended the Basin Plan (Resolution No. 2004-011) to incorporate a TMDL for bacteria at Los Angeles Harbor, including Inner Cabrillo Beach and the Main Channel (effective 2005). On May 5, 2011, the Los Angeles RWQCB also approved an amendment to the Basin Plan that incorporated a TMDL for Water Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters; this TMDL became effective on March 23, 2012. On November 1, 2011, the Los Angeles RWQCB approved an amendment to the Basin Plan to incorporate a TMDL for indicator bacteria in the Los Angeles River Watershed; this TMDL became effective on March 23, 2012.

Past, present, and reasonably foreseeable future related projects with in-water and over-water construction components, such as dredging, dike placement, fill, pile driving, and pier upgrades, would result in temporary and localized effects to water quality that would be individually comparable to those associated with the proposed Project. Water quality impacts associated within-water/over-water construction projects would not persist for the same reasons discussed in Section 3.11. Therefore, cumulative impacts would occur only if the spatial influences of concurrent projects overlapped. Of the cumulative related projects listed in Table 4-1, only Valero (#1), Yang Ming (#14), and Shell (#31) are in the vicinity of the proposed Project and involve in-water construction activities that may overlap. Pile driving and dredging of Berth 164 under the Valero project (#1) and Berths 167-169 under the Shell Project (#31) could overlap with Project construction in 2019. In addition, in-water construction for the Yang Ming project could potentially overlap with in-water construction of the proposed project in 2018 and possibly 2019. Further, a number of projects farther from the Project site in the Port of Los Angeles, and within the Port of Long Beach (including the Middle Harbor Terminal Redevelopment [#48[, and Gerald Desmond Bridge Replacement [#51]) would involve dredging and/or in-water

construction. However, as described in Section 3.11, water quality impacts from dredging would be limited and, therefore, the water quality effects of these projects would be limited to the immediate dredging or construction area. As a result, in-water and over-water construction of the present and reasonably foreseeable future projects would not be expected to result in a significant cumulative impact to water quality.

Development of port facilities associated with the cumulative related projects (Valero [#1], TraPac [#2], YTI [#4], China Shipping [#7], Phillips 66 [#10], Yang Ming [#14], APL [#26], Shell [#31], PBF Energy [#35], Middle Harbor Terminal Redevelopment [#48], and Piers G & J Terminal [#49]) are expected to contribute to a greater number of ship visits to the Port Complex. Assuming that the potential for accidental spills, illegal vessel discharges, and leaching of contaminants from vessel hulls would increase in proportion to the increased vessel traffic, waste loadings to the Harbor would also be expected to increase. The significance of this increased loading would depend on the volumes and composition of the releases, as well as the timing and effectiveness of spill response actions. The Oil Spill Prevention, Control, and Countermeasure (SPCC) regulations require that the Port have in place measures that help ensure oil spills do not occur, but if they do, that there are protocols in place to contain the spill and neutralize the potential harmful impacts. In addition, although the increase in vessels transporting hazardous materials, could result in an increase in the risk of a spill within the Harbor, an increased risk of spills Portwide doesn't necessarily equate to a cumulative impact to water quality, as the risk of a potential spill is not the same as an actual spill. Concurrent spills of hazardous substances during vessel transport are not likely to occur, therefore, cumulative impacts to water quality from the related projects are not likely. Thus, significant cumulative impacts relative to vessel spills would not be expected to occur. However, because these related projects could contribute to pollutant loadings through pollutant leaching from vessel hull coatings (such as TBT), these related projects could result in significant cumulative water quality impacts.

Contribution of the Proposed Project (Prior to Mitigation)

In-water construction activities, such as dredging and pile installation, would disturb and resuspend bottom sediments which would result in temporary and localized changes to water quality. Results from previous dredge receiving water monitoring studies in the Harbor indicate that turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases. Receiving water monitoring studies in the Harbor (MBC, 2001a, 2001b, 2002; USACE and LAHD, 2008; POLA, 2009a–i, 2010a–d) and other water bodies (Parish and Wiener, 1987; Jones & Stokes, 2007a, 2007b) have documented a relatively small, turbid dredge plume that dissipates rapidly with distance from dredging operations. Because of this, the water quality standards at the specified distances in the certification/permits resulting from in-water activities are not expected to be violated, and significant impacts to water quality would not result. Dissolved oxygen (DO) levels in Harbor waters could be reduced in the immediate vicinity of dredging and pile removal activities by the introduction of suspended sediments and associated oxygen demand on the surrounding waters. Reductions in DO concentrations, however, would be brief and are not expected to persist or cause detrimental effects to biological resources. During dredging at Berths 212–215 in 2001, there was little difference in DO and pH between Station C (300 feet downcurrent of dredging) and Station D (the control station, located at Berth 195 in East Basin) (MBC, 2001a). Similar effects are expected during dredging for the proposed Project due to similarity in sediment character, dredging depths and

currents. Therefore, it is expected that reductions in DO levels below 5 mg/L associated with proposed Project construction and dredging activities would not persist or cause detrimental effects to biological resources.

Changes in pH may occur in the immediate vicinity of dredging operations due to reducing conditions in sediments resuspended into the water column. During dredging at Berths 212–215 in 2001, there was little difference in pH between Station C (300 feet downcurrent of dredging) and Station D (the control station, located at Berth 195 in East Basin) (MBC, 2001a). Similar effects are expected during dredging for the proposed Project due to similarity in sediment character, dredging depths and currents. Thus, the water quality objective for pH would likely not be exceeded outside the mixing zone during proposed Project construction.

Contaminants, including metals and organics, could be released into the water column during the dredging and pile driving operations. However, like pH and turbidity, any increase in contaminant levels in the water is expected to be localized in the mixing zone and of short duration. The magnitude of contaminant releases would be related to the bulk contaminant concentrations of the disturbed sediments, as well as the organic content and grain size that affect the binding capacity of sediments for contaminants. Because the sediment characteristics vary across the Project site, the magnitude of contaminant releases, and water quality effects, would also vary. Sediments containing contaminants that are suspended by the dredging and pile installations would settle back to the bottom in a period of hours to one day. Transport of suspended particles by tidal currents would result in some redistribution of sediment contaminants. The amount of contaminants redistributed in this manner would be small, and the distribution localized in the channel adjacent to the work area. Monitoring efforts associated with previous dredging projects in the Harbor have shown that resuspension followed by settling of sediments is low (generally two percent or less). Consequently, concentrations of contaminants in sediments of the Harbor waters adjacent to the dredged area are not expected to be measurably increased by dredging activities and other in-water activities.

Sediments could be disposed of at LA-2 or disposed of at an approved upland location. Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA, 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005). The proposed Project would not result in additional or new impacts to sediment quality or water quality related to disposal of dredge material at LA-2 that were not previously evaluated. Disposal of dredged material at an upland disposal site would not affect sediment quality or water quality near the Project site.

As discussed in Section 3.11, changes to water quality associated with in-water construction are not expected to exceed applicable standards outside the mixing zone. Dredging for the proposed Project would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB. The Water Quality Certification would include monitoring requirements necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any State laws or regulations. Monitoring requirements typically include measurements of DO, light transmittance (turbidity), pH, and TSS at varying distances from the dredging operations. If turbidity levels exceed the threshold established in the WDRs issued by the LARWQCB, water chemistry analysis would be conducted and the LAHD would immediately meet with the construction manager to discuss modifications of dredging

operations to keep turbidity to acceptable levels. Monitoring data would be used by the dredging contractor to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume. This would keep temporary impacts from construction within permit limits, and because similar effects are not expected to substantially overlap in time and space (due to distance) with those from other related projects, in-water construction of the proposed Project would not be expected to make a cumulatively considerable contribution to a significant cumulative impact to water quality during in-water work under CEQA and NEPA.

In-water and over-water construction of the proposed Project has the potential to result in spills directly to Harbor waters. These Project-level spills during construction would be subject to SPCC regulations (that would contain and neutralize the spill) and spill responses by the dredging contractors (deploy floating booms to contain and absorb the spill and use pumps to assist the cleanup) would prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor. Any spills from past, present or reasonably foreseeable future related projects would be subject to the same regulations. Therefore, the proposed Project would not be expected to make a cumulatively considerable contribution to a significant cumulative water quality impact if spills from other in-water/over-water construction projects also occur.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from proposed Project-related upland operations are expected to be limited to small volume releases because large quantities of those substances are unlikely to be used, transported, or stored on the site. In addition, the terminal operator would be required to implement SPCC and OSCP Plans that ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. Because of this, upland operations of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to spills.

Operation of the proposed Project would not result in any direct discharges of wastes or wastewaters to the Harbor. However, stormwater runoff from the onshore portions of the proposed Project area would flow into the Harbor, along with runoff from adjacent areas of the large, primarily urbanized watershed. Stormwater runoff from within the Project site would be governed by a permit, similar to those required for the other cumulative related projects, that specifies constituent limits and/or mass emission rates that are intended to protect water quality and beneficial uses of receiving waters.

With the development of new backlands area, the footprint of the terminal would increase. For the backland portion of the proposed Project, BMPs would be designed to retain and/or treat the water quality design volume for the entire area subject to grading and resurfacing. As described in Section 3.11, there would be no substantial differences in pollutant discharges due to implementation of regulatory control measures that would be fully implemented for the proposed Project. Although runoff from the proposed Project could contain contaminants (i.e., metals) that have been identified as stressors for portions of the Port Complex, inputs from the proposed Project would be negligible compared with those from the entire watershed. In addition, the proposed Project would be operated in accordance with industrial SWPPPs that require monitoring and compliance with permit conditions. LID and other requirements would also be implemented via the planning, design, and building permit processes. With SWPPP and

LID compliance, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative water quality impact under CEQA or NEPA.

As part of the proposed Project, the footprint of the terminal would increase, and the amount of truck traffic and yard equipment would increase. Rail traffic would also increase at the existing on-dock railyard. This would increase the amount of particulates and chemical pollutants from normal wear of tires/train wheels and other moving parts, as well as from leaks of lubricants and hydraulic fluids that can fall on backland surfaces and subsequently be transported by stormwater runoff into the Harbor. Runoff would be managed consistent with applicable permit and ordinance requirements prior to discharge into Harbor waters, and, therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative water quality impact under CEQA or NEPA.

The increased number of ship calls associated with operation of the proposed Project could contribute to a comparatively higher number of spills or illegal discharges from vessels compared to baseline conditions. Spill events would be addressed according to procedures described in the SPCC, for oceangoing vessels that carry substantial amounts of fuel, and for other vessels transiting the Harbor. As a result, the proposed Project's vessel operations would not be expected to make a cumulatively considerable contribution to a significant cumulative water quality impact related to accidental spills or illegal discharges from oceangoing vessels under CEQA or NEPA.

With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with the proposed Project are not anticipated to result in significant ballast water discharge impacts from vessels. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to ballast discharge.

The leaching of metals from vessel hull coatings may occur as a result of additional vessels docking at the terminal facility as a result of the proposed Project. However, Evergreen Line, which uses the Everport Container Terminal, uses tin-free coatings on its vessels (Evergreen Line, 2015), but the hull fouling strategies of other vessels that could use the terminal are unknown. Therefore, hull leaching of non-TBT substances, such as metals, could incrementally increase. However, concentrations of metals in waters near the Project site have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to leaching from vessel hull coatings under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 3 through 5 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to causing regulatory standards to be violated in Harbor waters.

Because under Alternative 1 there would be only backlands improvements and no in-water or over-water construction activities, for the same reasons as described for the proposed Project related to Project site runoff, Alternative 1 would not make a

cumulatively considerable contribution to a significant cumulative impact under CEQA related to causing regulatory standards to be violated in Harbor waters due to site runoff. Further, for the same reasons as described for the proposed Project, operations under Alternative 1, including increased container throughput and increased truck traffic, are not expected to create pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. Therefore, Alternative 1 operations would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to causing regulatory standards to be violated in Harbor waters from accidental spills or illegal discharges from oceangoing vessels, or leaching from vessel hull coatings. Alternative 1 would result in no impact under NEPA.

Because under Alternative 2 there would be no new construction at the Project site, there would be no pollution, contamination, nuisance, or violation of regulatory standards due to construction, and no impacts would occur. Therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to construction. Further, for the same reasons as described for the proposed Project, operations under Alternative 2, including increased container throughput and increased truck traffic, are not expected to create pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. As such, Alternative 2 operations would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to causing regulatory standards to be violated in Harbor waters from accidental spills or illegal discharges from oceangoing vessels, or leaching from vessel hull coatings. Alternative 2 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA relative to water quality. Therefore, no mitigation measures would be required.