Chapter 2
Project Description

CHAPTER SUMMARY

The proposed Project would improve and expand the existing APL Terminal located at Berths 302-305 on Terminal Island within the Port of Los Angeles (Port). Chapter 1, Introduction, provides an overview of the CEQA and NEPA processes and the operational characteristics of the Port as a whole; Chapter 2 describes the proposed Project that is analyzed in this Draft EIS/EIR, as well as alternatives to the proposed Project. Based on the information presented in Chapter 2, Chapter 3, Environmental Analysis, evaluates the potential impacts of the construction and operation of the proposed Project and alternatives and Chapter 4, Cumulative Analysis, evaluates the cumulative impacts of the proposed Project and alternatives.

Chapter 2, Project Description, provides the following:

- Background information regarding the proposed Project site and a history of Project planning;
- Discussion regarding the Project need and Project objectives under CEQA and NEPA;
- A description of the Project, including the proposed improvements, the construction phasing, and the changes to operations anticipated to occur as a result of the proposed Project (based on throughput projections);
- Discussion of the baseline conditions under CEQA and NEPA; and
- Description and discussion of the Project alternatives, including those that were eliminated from further evaluation and the reasoning for elimination.

Key Points of Chapter 2:

The proposed Project would improve and expand the existing APL Terminal at the Port. As a result of the proposed Project, the APL Terminal is projected to accommodate 3.2 million Twenty-foot- Equivalent Units (TEUs) annually at full capacity[1] and 390 annual ship calls. See graph (inset) and Table 2-1 below. In addition, six alternatives to the proposed Project are evaluated, the No Project Alternative (Alternative 1), the No Federal Action Alternative (Alternative 2), Reduced Project: Four New Cranes (Alternative 3), Reduced Project: No New Wharf (Alternative 4), Reduced Project: No Space Assignment (Alternative 5), and Proposed Project with Expanded On-Dock Railyard (Alternative 6).

[1] The projected cargo throughput of 3.2 million TEUs represents the physical optimal capacity of the terminal in 2027 and is considered the highest reasonably foreseeable level; actual levels will depend on market conditions, but likely would not exceed 3.2 million TEUs.

1

Table 2-1: Existing and Projected Berths 302-306 Container Terminal Throughput

	CEQA Baseline *(July 2008-June 2009)*	NEPA Baseline (2027)	Proposed Project (at capacity)					No Project (at capacity) 2027
			2012	2015	2020	2025	2027	
Annual TEUs [a,b]	1,128,080	2,153,000	1,906,000	2,702,000	2,912,000	3,122,000	3,206,000	2,153,000
Annual Ship Calls	247	286	234	286	338	364	390	286
Annual Truck Trips (Total)	998,728	1,922,497	1,701,940	2,412,720	2,600,240	2,879,170	3,003,160	1,922,500
Annual Rail Trips (Total)	1,676	2,336	2,197	2,627	2,831	2,876	2,953	2,336
% Truck/Rail Splits	46/54	45/55	45/55	45/55	45/55	45/55	45/55	45/55
% TEUs by On-dock Rail	35%	35%	35%	35%	35%	33%	32%	35%
% TEUs by Near Dock Rail	11%	10%	10%	10%	10%	12%	13%	10%
% TEUs by Truck	54%	55%	55%	55%	55%	55%	55%	55%
Terminal Acreage	291	291	291	347	347	347	347	291
Number of A-Frame Gantry Cranes	12	12	16	18	24	24	24	12
Number of Berths[c]	4	3.5	3.5	4.5	4	4	4	3.5

2 a Baseline throughput numbers were generated by LAHD Wharfingers Office
3 b NEPA Baseline, Proposed Project and No Project throughput numbers represent terminal capacity throughput levels
4 c Useable berth space refers to the amount of space available to berth vessels and is dependent on vessel sizes. As ships get bigger, a fixed wharf length will have less berth space.

It is important to note that the throughput levels, ship calls, and truck and rail trips shown in the above graph and table for the NEPA baseline, the proposed Project and the No Project Alternative represent the terminal's capacity for the milestone analysis years. Actual throughput levels may be lower than described above due to market conditions. For example, proposed Project improvements such as a new wharf at Berth 306 and new cranes would increase the physical capacity of the terminal when compared to the No Project in year 2015, but actual throughput levels would depend on economic conditions in 2015. By analyzing the physical capacity, this Draft EIS/EIR assumes a robust growth scenario to ensure all potential environmental impacts are disclosed. Actual impacts will be dependent on actual throughput levels which are expected to be lower than described.

In conjunction with the proposed physical improvements, the Project would also include a number of features specifically intended and designed to reduce impacts to the environment, particularly related to reducing air pollutant emissions. Such features include, but are not limited to, provisions for Alternative Marine Power (AMP) at Berth 306 and potential use of electric rail mounted gantry (RMG) cranes. Preparation of this Draft EIS/EIR considered 23 alternatives to the proposed Project, including the following six alternatives that are carried forward for further co-equal evaluation:

1) No Project Alternative
2) No Federal Action Alternative
3) Reduced Project: Four New Cranes
4) Reduced Project: No New Wharf
5) Reduced Project: No Space Assignment
6) Proposed Project with Expanded On-Dock Railyard

2.1 Introduction

This section provides background information related to the proposed Project and describes proposed Project elements and the related terminal operations. This section also provides a discussion of the CEQA and NEPA baselines and a description of the Project alternatives evaluated in the Draft EIS/EIR.

2.2 Background and Project Overview

2.2.1 Port Planning

As described in Section 1.2.1 of Chapter 1, the LAHD operates the Port under legal mandates that identify the Port and its facilities as a primary coastal economic resource of the state and an essential element of the national maritime strategy for promotion of commerce, navigation, fisheries and harbor operations. According to such mandates, Port-related activities should be for the establishment, improvement, and operation of a harbor. Improvements and operations at the Port should be necessary or convenient for the following purposes: promotion and accommodation of commerce, navigation, fishery, commercial and industrial purposes, airports, highways, streets, bridges, belt line railroads, parking facilities, transportation and utility facilities, public buildings, convention centers, public parks, public recreation facilities, small boat harbors and marinas, snack bars, cafes, cocktail lounges, restaurants, motels, hotels, protection of wildlife habits, open space areas, areas for recreational use with open access to the public, and any other water dependent uses or purposes of statewide interest and benefit.

Optimized[2] development of the Pier 300 area of the Port has been contemplated since the Port completed its Master Plan in 1979, in consideration of forecasted cargo volumes arriving at West Coast ports. Specifically, the Port Master Plan (PMP) identified development of the area surrounding and including the proposed Project site (identified in the PMP as Area 9: Terminal Island/Seaward Extension) as being "of critical importance to the planning and use of virtually all other planning areas in the Harbor District," and targeted this area for dry bulk cargoes, rail loops, receiving, storage, and shipping facilities, with deepwater berths. Later planning efforts confirmed the necessity of developing the Pier 300 area to its optimal potential. As described in Section 1.2.4, in the 1980s and early 1990s the Port Complex (which encompasses the Ports of Los Angeles and Long Beach) and the USACE conducted a series of studies to forecast cargo volumes through the year 2020 and evaluate the capacity (ability) of the combined ports to accommodate those cargo volumes (e.g., LAHD et al. 1985; WEFA 1987, 1989, 1991). Those forecasts provided the basis for the Operations, Facilities and Infrastructure (OFI) Study developed in 1988 (VZM, 1988). That study concluded that the Port Complex needed to provide substantial additional physical facilities and make operational improvements in order to provide the necessary capacity for forecasted growth. The resulting San Pedro Bay 2020 Plan recommended the construction of new land for new container terminals and the optimization of existing terminals at both ports. Specifically

[2] *To optimize* means to make as functional as possible; whereas, *to maximize* means to use to the maximum extent possible. As part of the proposed Project, the Port seeks to develop the APL Terminal to allow the maximum cargo throughput in the most efficient manner (for example, the terminal at full build-out will be able to accommodate larger, more efficient ships). For the purposes of this document, the word *optimize* will be used; however, the environmental analysis assumes the maximum throughput levels predicted based on the terminal's physical capacity. Actual throughput levels might be lower due to consumer demand patterns and/or economic conditions

in the Port of Los Angeles, this effort resulted in the construction of the Pier 300 container terminal, as further described below (USACE 1992; USACE and LAHD, 1992). As discussed further in Chapter 1, despite the recent global economic downturn, long-term capacity at the Port Complex (approximately 2035 and beyond) would likely be constrained to levels short of projected future growth unless physical and operational upgrades are implemented.

2.2.2 Project Environmental Review History

In 1992, the LAHD and the USACE completed an EIS/EIR for the *Deep Draft Navigation Improvements, Los Angeles and Long Beach Harbors* (*Deep Draft FEIS/EIR*). The *Deep Draft FEIS/EIR* evaluated navigational improvements and creation of new landfill in the Outer Los Angeles Harbor and the development of Pier 300, including the dredging of channels to the Pier 300 site and the associated filling of 41 acres adjacent to Pier 300.

In 1992 and 1993, a project-level EIR was completed to assess the construction and operational effects of a new container terminal, the APL Terminal, on existing Port property at Pier 300. The document, known as the *Pier 300 Container Terminal EIR*, was also intended to serve as a technical report to support the NEPA compliance document.

The original development of Pier 300, as studied in the *Pier 300 Container Terminal EIR*, included: a 4,000-ft. contiguous wharf; shoreline improvements; the development of backland areas to include entry/exit and administrative facilities; a maintenance and repair facility; one or more longshore restroom buildings; an optional container freight station building; refrigerated container units, chassis racks, utilities, parking and other support facilities; and infrastructure; the construction and operation of an Intermodal Container Terminal Facility; at-grade rail crossings; a rail and road grade separation; access roadways; and a paved expansion area. The EIR also analyzed the construction and operation of the new container terminal, including the operation of four ship berths, 200 acres of container storage with a 48-acre expansion area, and a rail facility comprising about 30 acres capable of handling two unit trains at a time. The EIR projected that, when fully operational, the container terminal would handle approximately 1.22 million TEUs per year and employ approximately 275 people. Throughput estimates of the early 1990's, used for the preparation of the 1993 document, did not anticipate the lowering of trade barriers and other events, which have led to higher than expected growth rates.

The APL Terminal began operating in 1997 on 261 acres. In 2001, terminal operations were expanded when approximately 30 acres of backlands were acquired under a month-to-month space assignment. Other than the facilities delineated in the Pier 300 Container Terminal EIR and the 30-acre space assignment for container storage, no significant facilities have been constructed at the APL Terminal except the addition of 5,900 square foot (sf) building for tire storage.

In 1998, the Port approved the Channel Deepening Project and used dredge materials from the channel deepening to facilitate a number of expansions within the Port. It was estimated that approximately 5 million cubic yards (cy) of sediment would be removed, and disposal options included discharge to the Pier 400 fill, transport to and deposition at various upland locations, use for extension of the Cabrillo shallow water habitat, and

ocean disposal. Subsequently, deeper channels were made necessary by the growth of deeper-draft vessels calling at the Port which required the removal of more material than expected. In 2000, the USACE and LAHD initiated a supplemental EIS/EIR to address issues associated with the disposal of millions of additional cubic yards of sediment. One of the disposal sites included in the supplemental document was the area immediately east of Pier 300. The LAHD approved disposal of dredge material to the east of Pier 300, and in 2005 the Port placed 1.6 million cy of dredged material in this area to create approximately 41 acres of fill behind a rock dike. The fill area has been designated for General Cargo and Other uses (railyard, roadways, utilities, etc.) under Amendment No. 21 to the PMP, but to date this area has not been further developed. The development and operation of this area is part of the proposed Project evaluated by this Draft EIS/EIR.

2.2.3 Project Overview

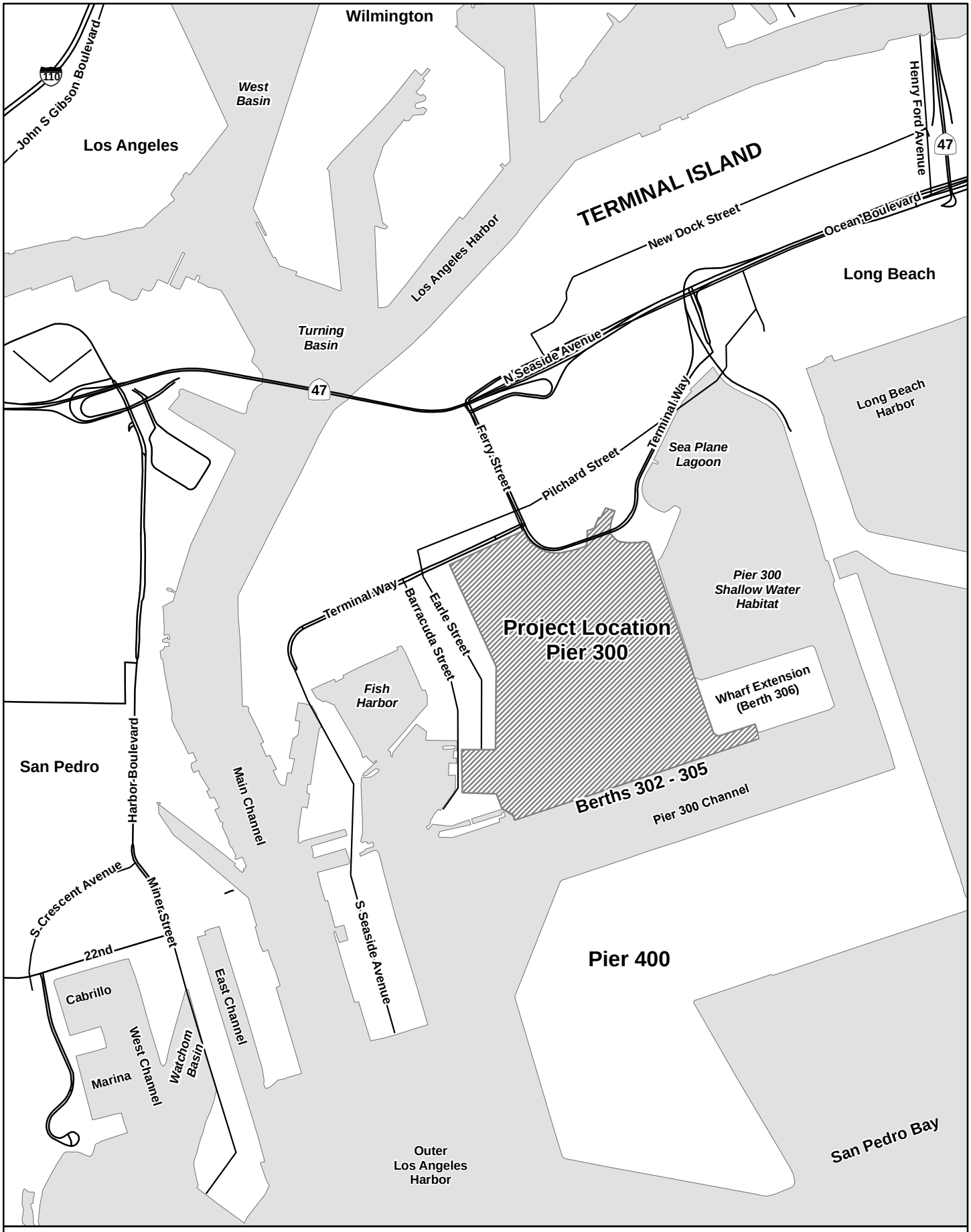
The proposed Project area (see Figure 2-1) encompasses approximately 347 acres at the Pier 300 area of Terminal Island, including the 291-acre existing APL Terminal area and a 56-acre expansion area.[3] Forty-one of the 56 acres of expansion area constitute the fill area described above, that resulted from the Channel Deepening Project.

Physical improvements proposed at the existing APL Terminal include adding cranes, modifying the main gate (conversion of existing outbound lanes to inbound lanes and the relocation of out gates), converting a portion of the existing dry container storage unit area to a refrigerated container storage area with a permanent distributed electrical power source, replacement of the existing roadability inspection facility where container transport trucks are inspected after arriving containers are attached to the trailer, expanded power shop facilities to facilitate tractor maintenance and marine office space, and installation of necessary infrastructure improvements.

The proposed expansion of the terminal includes usage of 41 acres of new terminal container backlands on previously constructed (but currently unimproved and unused) landfill, nine acres at the former Los Angeles Export Terminal (LAXT) site, two acres of existing land northeast of the main gate, and four acres of new wharf area to create Berth 306. Improvements within the expansion areas would include: extension of the existing concrete wharf to the east by 1,250 linear feet (lf) with AMP facilities and new cranes, paving and infrastructure to support traditional/diesel-powered equipment operations, electric equipment operations, and potential automated operations within the new Berth 306 backlands; development of a new out-gate location; and additional parking area in Berth 301 backlands.

The proposed Project includes dredging at the new Berth 306, which is at various depths in the low fifties, to a depth of -55 ft MLLW plus two ft of overdredge. Depending upon the quality of the dredge sediments and site availability, dredged material would be beneficially reused and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat). If these sites are unavailable or impracticable, an ocean disposal site (LA-2) could be considered assuming the material was approved for such use by the Los Angeles Regional Dredged Material Management Team (DMMT).

[3] Unless otherwise noted, all project areas, lengths and volumes are approximates.


Wilmington
West Basin
Los Angeles
John S Gibson Boulevard
110
TERMINAL ISLAND
Henry Ford Avenue
47
New Dock Street
Ocean Boulevard
Long Beach
Los Angeles Harbor
Turning Basin
N Seaside Avenue
47
Ferry Street
Pilchard Street
Terminal Way
Long Beach Harbor
Sea Plane Lagoon
Terminal Way
Barracuda Street
Earle Street
Pier 300 Shallow Water Habitat
Project Location
Pier 300
Fish Harbor
Wharf Extension (Berth 306)
San Pedro
Harbor Boulevard
Main Channel
Berths 302 - 305
Pier 300 Channel
S Crescent Avenue
Miner Street
S Seaside Avenue
22nd
Pier 400
Cabrillo
East Channel
West Channel
Marina
Watchom Basin
Outer Los Angeles Harbor
San Pedro Bay
N
CDM
Legend
Existing Terminal
1,000 0 1,000
Feet
Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Project Site and Vicinity
Figure 2-1

Currently Eagle Marine Services, LTD (EMS) operates the existing 291 acre APL Terminal. The Terminal includes 261 acres covered by an existing lease (LAHD Permit No. 733) and an additional approximately 30 acres of adjacent backlands authorized for use under a month-to-month space assignment (Non-Exclusive Berth Assignment No. 01-31). The proposed Project would make available an additional 56 acres which would be operated by EMS under an amendment to the existing LAHD Permit No. 733. In addition, EMS would continue to utilize the 30 acres currently authorized for use under the month to month Non-Exclusive Berth Assignment No. 01-31. The term of the amended permit would remain unchanged (1998 to 2027), but the permit would be amended to include the additional 56 acres.

2.3 Project Purpose and Need

2.3.1 Project Need

The proposed Project is needed to meet a portion of the Port's projected container throughput demand for the year 2035. In 2007, studies projected Port container throughput demand within the San Pedro Bay Ports Complex of Los Angeles and Long Beach (Port Complex) would be constrained at 43.2 million TEUs by 2023; however, this projection was revised in 2009 to take into account a prolonged economic downturn, which negatively impacted global trade and resulted in dramatically reduced actual container throughput and future growth projections. As a result, current projections now estimate that, assuming planned capacity expansions and handling efficiency improvements occur, the Port Complex throughput capacity constraints would be experienced in 2035 at 43.2 million TEUs, twelve years later than expected in the 2007 study. The revised projection assumes completion of planned physical and operational improvements to terminals within the Port Complex, including the proposed Project.

Providing the capacity needed to manage the projected level of cargo throughput is critical for the Port to fulfill its role of facilitating trade along the Pacific Rim, which is expected to grow with anticipated increases in population and foreign trade. The Port also is instrumental to the regional and national markets.[4]

2.3.1.1 Port-wide Terminal Capacity and Throughput

Terminal planning involves balancing existing and potential terminal physical and operational capacities with market demand projections for cargo. For the proposed Project, LAHD used a number of studies that analyzed the physical constraints of, and predicted market demand projections for, the Port Complex along with specific modeling of the APL Terminal to develop overall terminal throughput capacity. Details of the modeling effort and assumptions are provided in Section 1.2.4 of Chapter 1 and Appendix C1, and are summarized below.

[4] It should be noted that the previously cited forecast and capacity studies are Port-wide studies and do not consider the market conditions of individual shipping companies and terminal operators. There are competitive differences between container terminals within the Ports, and each terminal's market share will reflect these differences at any given point in time.

As discussed in Section 1.2.4, the Port Complex experienced dramatic growth in cargo volumes through 2006 with an average growth rate of over 10 percent per year between 1995 and 2006. In December 2007, Global Insight and the Tioga Group prepared a long-term cargo forecast through 2030 for the Port Complex. This forecast was a demand-based (i.e., unconstrained) forecast, assuming that transportation and infrastructure capacity would be available to meet whatever demand developed. The 2007 forecast predicted that market demand for cargo through the Ports would be 65.1 million TEUs in 2030. Shortly after publication of the 2007 cargo forecast, the U.S. and world economies experienced a severe recession that dramatically impacted international trade and encouraged a second look at previous projections. As a result, the Ports reexamined the forecasted cargo projections based on new economic conditions. The 2009 forecast update starts from a lower base volume than the 2007 forecast. In addition, the model predicted continuing declines through 2009 with 2010 marking the end of the recession and a return to positive cargo growth rates (Tioga, 2009). Essentially, according to the model, it will take the Ports six to seven years to return to their peak TEU volumes seen in 2006, and the Ports were projected to grow at a slower pace than predicted in the 2007 forecast. The 2007 forecast predicted that market demand (not physical capacity) for cargo through the Ports would be 65.1 million TEUs in 2030. The updated 2009 forecast predicts that market demand will now be 34.6 million TEUs in 2030 and 43.2 million TEUs in 2035 when extrapolated.

As discussed above and in Section 1.2.4, the demand forecasts are unconstrained forecasts meaning that the modeling effort does not assume any physical constraints at the Port or within the surrounding regional infrastructure. Therefore, along with the demand forecasts, LAHD also examines the Port's physical capacity. The approach of evaluating demand forecasts in conjunction with terminal throughput capacity allows the Port and its tenants to identify shortfalls between demand for future cargo volumes and the capacity of the terminals to handle those volumes.

To project or estimate the maximum or optimal throughput capacity of each terminal in the Port through the year 2035, the Port uses a methodology based on two capacity models, one that analyzes the terminal's backland capacity and one that analyzes the terminal's berth capacity. The modelers make realistic assumptions regarding different physical improvements (e.g., increasing the length of a berth or adding more container yard) and operating parameters (e.g., increasing the number of hours worked per day or crane productivity, decreasing the amount of time containers are allowed to remain in the terminal) in order to estimate the future operating throughput capacity of each terminal, including ones projected to be built or approved. The assumptions, while reasonable, result in higher throughput capacity than exists today on a per acre basis; for example, terminals are assumed to be able to reach throughputs of 10,000 TEU per acre per year, as compared to existing terminal throughput levels which are between 5,000 and 7,000 TEUs per acre per year.

The demand forecasts and the capacity modeling demonstrate a need for the Port Complex to be improved and expanded in order to accommodate the future extrapolated demand forecast of 43.2 million TEUs by 2035.

2.3.2 Project Purpose

The overall purpose of the proposed Project is to optimize and expand the cargo handling capacity at the APL Terminal to accommodate the increased throughput demand expected at the Port, including at the APL Terminal, in the long-term, while also maintaining consistency with established Port policies pertaining to the environment. This objective would be accomplished through expansion and improvement of the existing Berths 302-305 marine terminal from the current 291 acres to approximately 347 acres, including extension of the existing wharf by 1,250 ft (creating Berth 306), to accommodate an annual throughput of approximately 3.2 million TEUs by 2027.

As discussed above in Section 2.3.1.1, both the 2007 Mercer Study and the 2009 Tioga study forecast that Port will need to continue to expand to accommodate Port-wide demand in the long term.

The expansion and optimization of Pier 300 has been contemplated and analyzed in evaluations prepared for the Port, including Port Plan, Port Master Plan (as amended), and the *Channel Deepening Supplemental EIS/EIR.*

2.3.3 CEQA Project Objectives

The LAHD's overall goal for the proposed Project is threefold: (1) provide a portion of the facilities needed to accommodate the projected long-term growth in the volume of containerized cargo through the Port and at the APL Terminal; (2) implement the Port's green growth strategy, which includes growing core operations while greening to mitigate the environmental impacts of that growth on the local communities and the Los Angeles region; and (3) carry out the Port Strategic Plan to maximize the efficiency and capacity of terminals while raising environmental standards through application of all feasible mitigation measures. The Port's green growth strategy relies on utilizing pollution control measures included in the Clean Air Action Plan (CAAP), sustainable lease agreements, and other sustainability measures.

To meet the overall Project purposes, the following objectives need to be accomplished:

- Optimize the use of existing land at Berths 302-305, the proposed Berth 306 backlands, and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- Improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- Increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306;
- Incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berth 306; and
- Improve the access into and out of the terminal and internal terminal circulation, at Berths 302-306 to reduce the time for gate turns and to increase terminal efficiency.

2.3.4 USACE Purpose and Need

As discussed above and in Chapter 1, implementation of the proposed Project is needed to provide the terminal capacity to accommodate the long-term future cargo demand projected for the Port. The proposed Project would meet a public need for economic growth in trade and import/export of goods, as well as a need for efficiency in cargo handling at the Port.

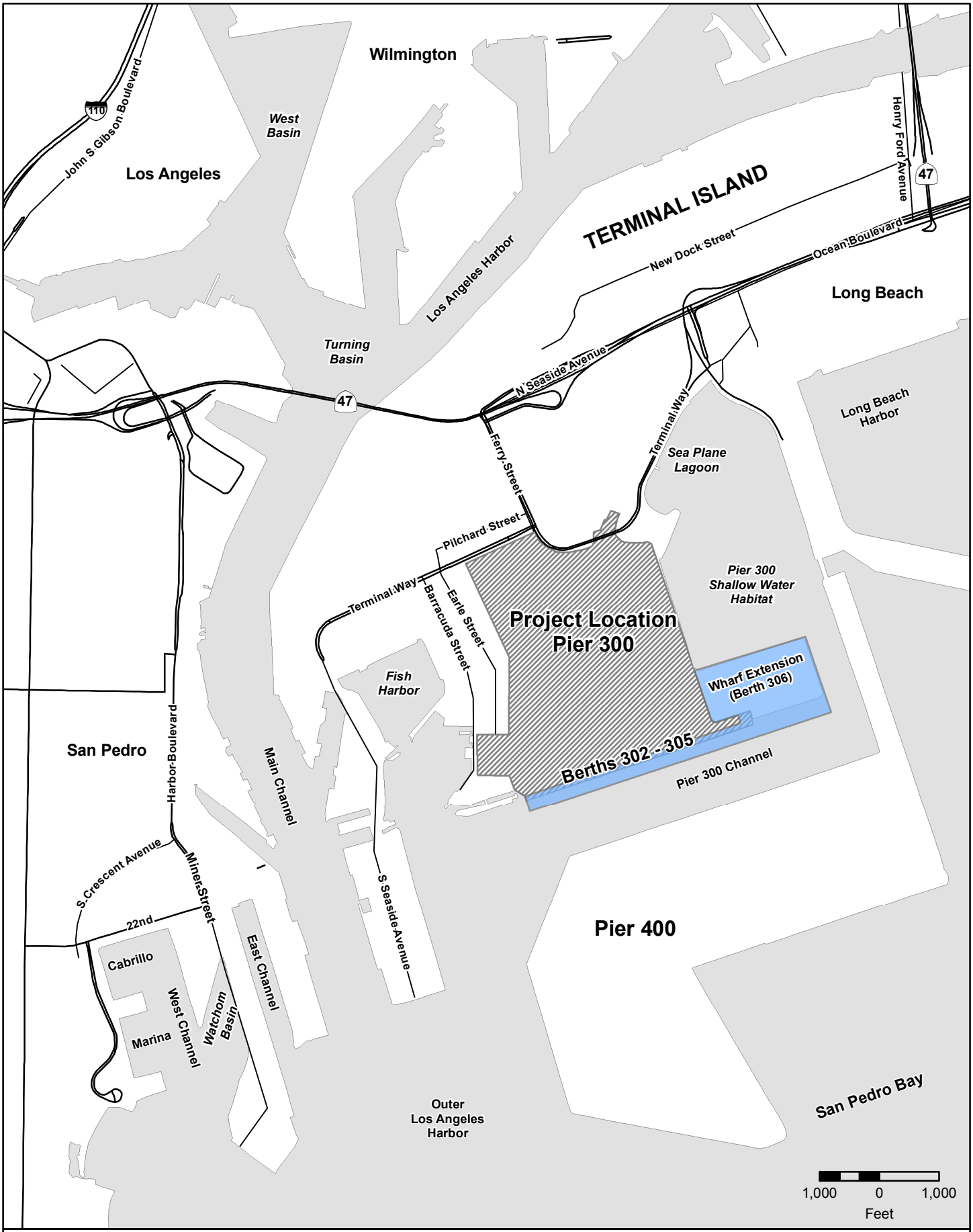
The overall purpose of the proposed Project is to optimize the cargo handling efficiency and capacity at the APL Terminal to accommodate projected long-term increases in volume of containerized goods shipped through the Port. As the proposed Project is water dependent, optimizing the terminal's efficiency would improve marine shipping and maritime trade. The overall project purpose serves as the foundation of the USACE Section 10 and Section 103 analyses. Under Section 10, the USACE will conduct public interest review (per 33 CFR 320.4).

In general, the scope of federal review for evaluating the potential impacts of a proposed project is focused on those aspects of the project that the affected federal agency has jurisdiction over. The USACE has jurisdiction over activities affecting navigable waters and other waters of the U.S., as well as any ocean transport and disposal activities involving dredged material. As such, the primary focus of USACE's review of the proposed Project is on those activities that directly or indirectly affect the aquatic environment, such as dredging and any associated in-water reuse or ocean transport and disposal activities, and construction of new wharf/pier facilities. The scope of USACE review does, however, include other related aspects, including some activities in upland (non-water) areas, such as staging and storage of materials along the shoreline required to complete in-water and over-water activities, and operations. Section 2.7 contains a summary of how the USACE's scope of federal review is typically defined, and Figure 2-2 illustrates the scope for this Project.

2.4 Project Location and Setting

2.4.1 Regional Setting

The Port Complex, located in the San Pedro Bay approximately 20 miles south of downtown Los Angeles, serves as one of the Nation's primary gateways for international trade (Figure 2-1). International trade is a key economic engine for the local region and the country. The Port Complex serves as a vital link in the goods movement chain delivering goods for our local market as well as those shipped by truck and rail throughout the country. The Port Complex serves as the country's primary gateway for Asian-based trading partners. Approximately half of the cargo coming through the Ports is delivered by truck to the regional market, which is an area roughly 500 to 700 miles from the Port (refer to Section 1.2.2.2.1.1 and Figure 1-5 in Chapter 1, Introduction, for additional information). The local freeways that directly serve the Port are the I-110, I-710, SR-47, and SR-103. Goods destined for national markets beyond this area are delivered primarily by rail. The Alameda Corridor is the primary rail line between the Port and downtown railyards. Other rail lines extend from the Downtown area north and east.



N

CDM

USACE Scope of Federal Review*

- 41 Acres
- New Wharf/Berth 306
- Installation and Operation of 12 New Cranes (Berths 302 to 306)
- 100 Feet from Waters Edge

*Cumulative impact analysis associated with 41 acre backland development and new crane operations extends beyond the delineated direct and indirect impact areas under Federal jurisdiction/review for some issues, such as air quality and traffic.

Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
USACE Scope of Federal Review

Figure 2-2

2.4.2 Local Setting

The Port consists of 28 miles of waterfront, approximately 300 commercial berths, and 7,500 acres of land and water. The Port is administered under the California Tidelands Trust Act of 1911 by the LAHD. The LAHD is chartered to develop and operate the Port to benefit maritime uses, and it functions as a property owner by leasing Port properties to more than 300 tenants. The Port contains 27 major cargo terminals, including facilities to handle automobiles, containers, dry bulk products, liquid bulk products, and cruise ships, as well as extensive transportation infrastructure for cargo movement by truck and rail. The Port accommodates commercial fishing, canneries, shipyards, and boat repair yards; provides slips for 6,000 pleasure craft, sport fishing boats, and charter vessels; and supports community and educational facilities such as a public swimming beach, the Boy/Girl Scout Camp, the Cabrillo Marine Aquarium, and the Maritime Museum.

2.4.3 Project Site and Surrounding Uses

The proposed Project site is located on Terminal Island, within an industrial area in the vicinity of Fish Harbor. The site is within the Port of Los Angeles Community Plan area of the City of Los Angeles, which is adjacent to the communities of San Pedro and Wilmington (Figure 2-1). Four bridges provide vehicular and rail access to Terminal Island from the mainland: the Vincent Thomas Bridge, the Schuyler Heim Bridge, the Gerald Desmond Bridge, and the Badger Avenue Railroad Lift Bridge.

The existing APL Terminal is located on Pier 300. It occupies 291.2 acres and includes: 4,000 ft of wharf with four labeled berths (Berths 302 through 305); an on-dock railyard that can accommodate up to 64 five-platform double-track railcars (equivalent to nearly three full trains); two dedicated lead rail tracks with flexible entrance/exit points off the main rail line within the Alameda Corridor; a transloading dock; a gate complex that includes an intermodal control tower; 10 inbound and 10 outbound lanes; automobile parking facilities; two marine buildings; 600 refrigerated container plugs; a washdown facility for refrigerated container units and trucks; and maintenance and repair facilities consisting of a chassis shop (approximately 30,000 sf) and a Power Shop (approximately 22,000 sf).

Existing equipment and facilities on the proposed Project site include: 12 A-frame 100'-gauge cranes along the south-facing wharves, along with mobile equipment used to handle containers. Current cargo-handling equipment consists of approximately 36 forklifts, 7 side picks, 19 top handlers, 8 Rubber Tire Gantry (RTG) cranes, 10 Rail Mounted Gantry (RMG) cranes, and 195 yard tractors. Figure 2-3 shows key features of the existing container terminal.

With respect to surrounding uses, the proposed Project site is generally bounded as follows:

- On the north by Terminal Way, Seaside Avenue, the Terminal Island Water Reclamation Plant, the vacant former LAXT facility, Mobil Oil Corp facilities, the U.S. Custom House, the Port Fire Station 40, the Terminal Island Container Transfer Facility and associated rail tracks, and a dry bulk terminal remote storage area;

N

CDM

Legend

Existing Terminal

500 250 0 500

Feet

Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Project Site - Existing Conditions
Buildings
Figure 2-3

- On the east by the Pier 300 Shallow Water Habitat, Navy Way, and Sea Plane Lagoon;
- On the west by Earle Street, the Los Angeles Yacht Club, Starkist Foods Inc., Pan Pacific Fisheries, Tri-Union Fish Company Fish Harbor, and the Main Channel; and
- On the south by the Pier 300 Channel and the Outer Los Angeles Harbor.

Slightly farther to the south is the 484-acre APM Terminals/Pier 400 area, which hosts six berths, backland operations, and on-dock rail operations. Heavy port industries also occur to the north, east, and west. Farther to the north and west are the communities of Wilmington, Harbor City, and San Pedro, respectively.

2.4.4 Historical Use of the Project Site

Most of the proposed Project site is part of landfill created by the placement of dredge material removed from the Los Angeles Harbor for the Los Angeles Harbor Deepening Project in 1981-1983 (POLA, 1993). Since then, the container terminal site has been the subject of several improvement projects to consolidate landfill material.

Prior to development of the site as a commercial marine terminal, the general area was under the control of the U.S. Navy and used for the Naval Reserve Training Center. A Naval Air Station, known as Reeves Field, was also established on the site. Reeves Field was decommissioned in 1947. Following use by the Navy, the area was used to store dry bulk goods (including petroleum coke), and used to support institutional and industrial uses (POLA, 1979). Other uses included sludge-drying beds (22 acres) by the City of Los Angeles Department of Public Works' Bureau of Sanitation and use by the Los Angeles Police Department for police driver training. A large portion of the proposed Project site was created as the 190-acre fill area after the Port Master Plan was certified in 1980. Dredge material from the Harbor Deepening Project was used to create the 190-acre fill area that underlies the majority of the existing APL Terminal. As described in more detail in Section 2.2.2, the proposed Project site was subsequently developed as the APL Terminal, which opened in 1997.

In 1998, the Port approved the Channel Deepening Project, which removed millions of cy of sediment from the Los Angeles Main Channel, West Basin, East Channel, and East Basin, and disposed of it in various locations. In 2000, the Port approved additional disposal sites for sediments associated with the Channel Deepening Project. Approximately 1.6 million cy of the dredge materials was used to expand a number of areas in the Port, including the 41.2-acre landfill expansion of Pier 300.

To the west of the APL Terminal are portions of the former LAXT facility. The former LAXT facility at the Port opened in 1997 for the purpose of loading petroleum coke and coal onto ships bound for power plants in Asia. Coal from the western United States was transported by rail to LAXT and stored in large hemispherical silos constructed at the north end of the Port. The coal would then be transported approximately 1.25 miles by a covered conveyor, generally parallel to Terminal Way and Earle Street, to a specialized conveyor crane that loaded the coal on to ships at Berth 301. LAXT operations within the backlands area at Berth 301 included a large metal silo that provided short-term storage of coal to be loaded on an arriving ship. This facility could also receive and store coal delivered by truck. The backlands area also included two warehouse/maintenance buildings, an administrative/operations office, a power substation, a surface water

impoundment area, and an open area for equipment/container storage. Based on a change in the global market for coal (i.e., increased availability of coal from Australia and other places in Asia closer to where the coal was needed) and other business issues, LAXT operations at the Port ceased in Fiscal Year 2003. In late 2006, LAXT's permit to lease and operate at the Port was relinquished and the miscellaneous former LAXT structures and enclosed conveyer were removed from the area adjacent to the proposed Project site. However, various former LAXT paved areas and a settling pond remain on the approximately 7-acre upland area behind Berth 301, as does the power substation. As part of the proposed Project, the Berth 301 backlands would be used for parking and miscellaneous storage.

2.5 Proposed Project Development

This section describes the proposed redevelopment and expansion of the APL Terminal, the anticipated construction phasing, and the anticipated terminal operations once the improvements are completed.

Figure 2-3 presents a map of the existing conditions at the proposed Project site, while Figure 2-4 locates the site improvements of the proposed Project at full build-out and optimal capacity (2027).

2.5.1 Project Elements

2.5.1.1 Overview

The proposed Project encompasses approximately 347 acres and includes improvements to the existing 291-acre APL Terminal and an expanded area of 56 acres. This section presents a summary of the improvements that would occur within each area, followed by a more detailed description.

Improvements to the existing terminal would:

- Modify the outbound gates associated with the main gate;
- Modify the terminal entrance lanes;
- Modify the Earle Street gate;
- Install up to 4 new cranes at Berths 302-305;
- Convert a portion of the existing dry container storage unit area to a refrigerated container unit (reefer) storage area equipped with plug-in electric power;
- Demolish and re-construct the Roadability facility;
- Expand the Power Shop facilities by constructing and operating a separate two-story Power Shop Annex building (just north of the existing Power Shop), which would include tractor maintenance bays (first floor) and Marine Offices (second floor); and
- Install utility infrastructure at various areas in the existing backlands (including the removal and installation of new light poles, utilities for a new "Meet and Greet" booth on backlands behind Berth 301, etc.).

Legend

- New 41 acres
- New 4 acres
- New 7 acres
- New 2 acres
- New 2 acres
- Existing Terminal

N

CDM

500 250 0 500

Feet

Port of Los Angeles

Berths 302 - 306 [APL]

Container Terminal Project

Proposed Project

Figure 2-4

Proposed expansion-area components would:

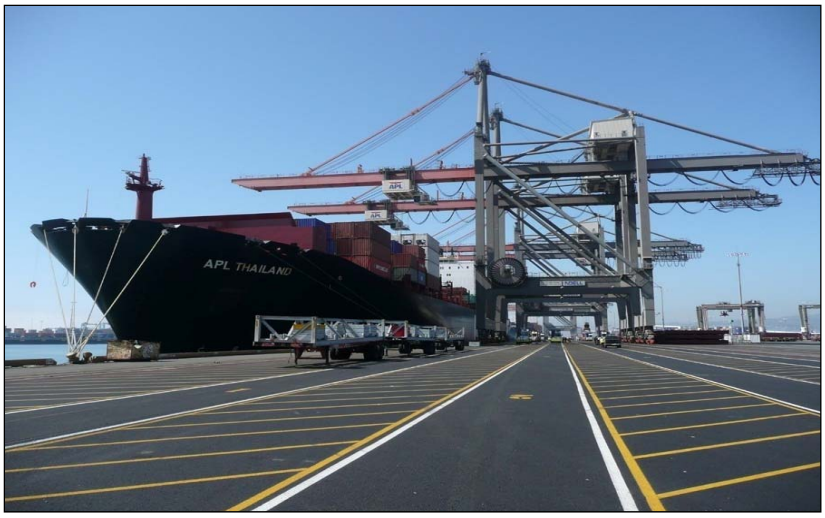
- Construct approximately 1,250 lf (4 acres) of concrete wharf to create Berth 306;
- Install up to 8 new cranes on the new wharf at Berth 306;
- Install AMP along the new wharf at Berth 306;
- Dredging at Berth 306; the dredge material (approximately 20,000 cy) will be beneficially reused (as fill), or disposed of at an approved confined disposal facility (CDF) site. If these options are unavailable or impracticable, an existing ocean disposal site could be considered (i.e., LA-2);
- Improve approximately 41 acres of already constructed but unimproved fill as container terminal backland with infrastructure that could support traditional operations, electric equipment operations, as well as potentially automated operations on the Berth 306 backlands (a majority of the new infrastructure would be located adjacent to existing stations or substations near the reefer area of the existing backlands);
- Redevelop approximately 2 acres of the former LAXT conveyor right of way and approximately 7 acres of former LAXT backland behind Berth 301 into container terminal backland; and
- Develop approximately 2 acres of existing land northeast of the current main gate for a new out gate location.

Operation of the Berth 306 Backlands. The existing APL Terminal operates using "traditional" methods. Once containers have been off-loaded from a ship or received through the gates on trucks and trains, the containers are stored and moved around the backlands area of the terminal using mostly diesel-powered cargo-handling equipment. It is foreseeable that a technology change could result in replacement of some of the traditional backland operations at the APL Terminal through the use of an automated container handling system on the 41-acre backland area adjacent to proposed Berth 306. If installed, such a system would involve the use of semi-automatic dual hoist electric shore side gantry cranes, Automated Guided Vehicles (AGVs), electric automated stacking cranes (ASCs), and semi-automated electric Landside Transfer Cranes (LTCs). Because it is not certain as to whether or when use of an automated system would commence, for the purposes of environmental review, the EIS/EIR assumes that either (1) the terminal would continue to operate using traditional operation throughout the lease term; or (2) the operation of the 41-acre backland would transition from a traditional operation (i.e., transport of containers by mostly diesel-powered equipment) to an automated operation with mostly electric equipment during the lease term. More discussion of the potential design of the proposed Berth 306 backlands can be found in Section 2.5.3.2 Terminal Operations.

2.5.1.2 Shoreline Improvements

2.5.1.2.1 Wharf Area Expansion and Improvement

The proposed Project would include construction of approximately 1,250 lf of new wharf area, encompassing approximately 4 acres that would extend eastward from the existing Berths 302-305 wharf. Photograph 1 shows a typical berth on the existing wharf at the APL Terminal.



Photograph 1: View of existing wharf, cranes, and berthed vessel

Photograph 2 shows the shoreline area along Berth 306 where the new wharf would be constructed. No new rock dike or fill would be required, as this area was previously constructed as part of the Channel Deepening Project, which created the 41-acre undeveloped fill area along Berths 305 and 306. New wharf construction would, however, require the placement of approximately 515 new 24-inch-diameter concrete piles to support the new wharf. These piles would be placed by barge-mounted pile drivers that would be brought to the site by tugboat and temporarily supported by a wharf boat. Construction would also involve the operation of concrete trucks, and heavy-duty over-the-road trucks for the delivery of structural materials, cranes, and other fabrication equipment.

When completed, the concrete wharfs of Pier 300 (Berths 302-306) would total approximately 5,250 ft. The existing wharf was designed to accommodate the largest ships in the current transpacific fleet, which can each carry up to 10,000 TEUs. The new wharf extension would be similarly designed. The existing wharf currently has four (4) berths based on the existing average vessel size. Once the new wharf along Berth 306 is completed (approximately 2014), the number of berths serving the terminal would increase to approximately 4.5. However, as fleet changes occur and larger vessels are used over time, the number of useable berth space along the Berths 302 to 306 wharf would decrease to 3.5 berths by 2027.

The crane models, currently operating at the existing wharf are not able to span the width of vessels capable of carrying more than 10,000 TEUs. The new wharf extension and cranes would have the capacity to accommodate larger ships. The largest vessel that is expected to operate as part of the transpacific fleet through year 2027 is the 10,000 to 10,999 TEU vessel. This analysis assumes the operation of a range of TEU vessels that includes the 10,000 to 10,999 TEU vessels.

Photograph 2: Area of new wharf along Berth 306

AMP infrastructure would be installed along the new wharf at Berth 306. AMP is the technique of utilizing shoreside electrical power from the power grid to operate the container ships when they are berthed at an appropriately equipped wharf. AMP connection voltage would be 6.6 kv, 3-phase, 60 Hz. The proposed Project would assist visiting fleets (in this case, APL and third party shipping lines) to comply with the California Air Resources Board (CARB) adopted schedule for implementing AMP power.[5]

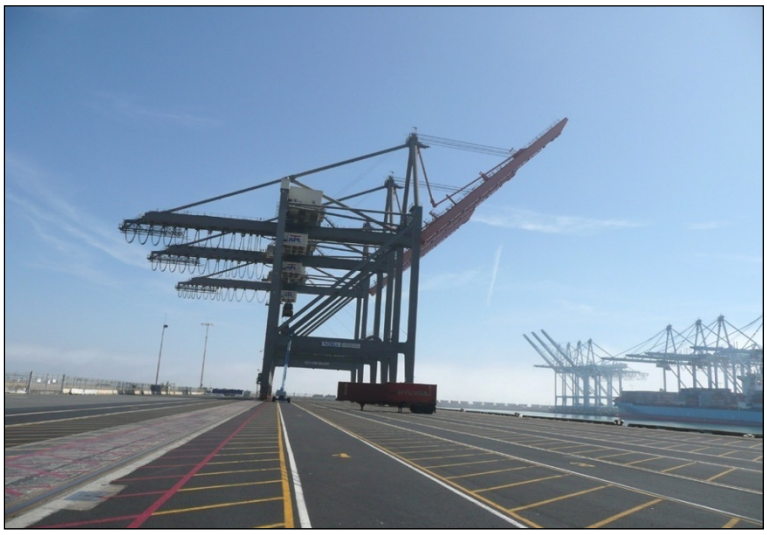
In addition to electricity, the standard ship services at wharf include other utilities, such as telephone and water hook-up facilities at each berth.

2.5.1.2.2 New Shore-Side Gantry Cranes

Under the proposed Project, up to 12 new A-frame cranes (also known as shore side gantry cranes) would be installed on the wharves at Berths 302 to 306 (four new cranes would be added to the 12 existing cranes on the existing wharf along Berths 302-305, and eight new cranes would be installed at the new Berth 306 wharf). With the existing 12 cranes and the installation of the proposed 12 new cranes at Project completion, the APL Terminal would have a total of 24 cranes. A-frame cranes at the existing terminal have fixed towers that are approximately 245 ft high. When stowed (at a 45-degree angle), the articulated booms on these cranes normally extend to a height of about 280 ft and, for maintenance, are capable of being extended up to 360 ft in the vertical position.

[5] As provided for under Title 17, California Code of Regulations section 93118.3, a fleet's vessels — including container vessels, passenger vessels, and refrigerated container (reefer) vessels — must shut down their auxiliary engines (not including 3 or 5 permissible hours of total operation, as specified in the regulation) as follows: (a) In 2014, at least 50 percent of a fleet's visit to the port must meet these operational time limits, and the fleet must reduce its fleet's onboard auxiliary-diesel engine power generation at a given berth by 50 percent from its baseline power generation; (b) in 2017, at least 70 percent of a fleet's visit to the port must meet the aforementioned operational time limits, and the fleet must reduce its fleet's onboard auxiliary-diesel engine power generation at a given berth by 70 percent from its baseline power generation; and (c) in 2020, at least 80 percent of a fleet's visit to the port must meet the aforementioned operational time limits, and the fleet must reduce its onboard auxiliary-diesel engine power generation at a given berth by 80 percent from its baseline power generation.

Photograph 1 shows existing A-frame cranes at the APL Terminal and Photograph 3 shows a crane in the stowed position.



Photograph 3: A-Frame crane in the stowed position.

The 12 new cranes would function in a similar manner to the existing cranes but have a longer outreach and higher lift capabilities than the existing cranes in order to accommodate larger ships. When stowed, the height of the new cranes is estimated to extend to approximately 340 ft, and while operating, the A-frame structure of the cranes is estimated to stand at approximately 260 ft.

The new cranes would be outfitted with semi-automatic dual trolley equipment so that they could support an automated backland behind the new Berth 306 if such a system is used (see Section 2.5.1.5 below for a detailed description of the proposed automated system).

2.5.1.3 Dredging

The portion of the channel adjacent to the new wharf at Berth 306 would be dredged to restore a depth of -55 ft MLLW plus an additional two ft of overdredge. New ships in the world container vessel fleet and pending ship orders indicate that container vessels with a draft of -52 ft are being planned, which would require a channel as deep as -55 ft MLLW plus an additional two ft of overdredge during construction dredging (tolerance). The area along Berth 306 is at various depths within the low fifties and currently less than 55 ft deep. Approximately 20,000 cy of marine sediments would be removed alongside Berth 306 to achieve the desired design depth (POLA, 2009).

2.5.1.4 Berths 302 – 305 Backlands Redevelopment

Redevelopment of the backlands at the existing APL Terminal involves existing buildings, backlands, and gates. Figure 2-4 shows the general location of the buildings and gate structures.

Buildings. The proposed Project would include demolition and reconstruction of the Roadability Facility, including approximately 4,160 sf of new building space and approximately 10,000 sf for two new canopies (see Photograph 4). In addition, the proposed Project would expand the Power Shop facilities to add tractor maintenance bays and Marine Offices, including approximately 10,158 sf for the maintenance bays, and approximately 10,150 sf of second floor space for offices (see Photograph 5). The redevelopment of the Marine Office facility would meet Leadership in Energy and Environmental Design (LEED) standards and are expected to achieve, at minimum, LEED silver certification, consistent with the LAHD Green Building Policy.

Backlands. The proposed Project would convert a portion of dry container storage unit area to a refrigerated container storage unit (reefer) area with use of electric power (Photograph 6 shows refrigerated storage containers - reefers). Terminal lighting and fire hydrants would be installed within the improved backland areas. The additional backland improvements would require construction activities such as grading, drainage, paving, striping, lighting, fencing, and the addition of utility facilities and equipment.

Gates. The proposed Project includes the construction of a new Meet and Greet booth (approximately 400 sf) on backlands behind Berth 301, modifications to the Earle Street Gate, and modifications to the northeast entrance (Photograph 7 shows the existing in-gate and out-gate at the APL). Development in the northeast entrance area would include construction of a new out-gate on two acres of undeveloped land northeast of the current main gate, coupled with reconfiguration of the old out-gate.

Photograph 4: Roadability canopy

Photograph 5: Powershop

Photograph 6: Refrigerated containers

Photograph 7: Existing in-gate and out-gate

In addition, within the existing backlands behind Berths 302-305, the proposed Project includes the installation of a new Los Angeles Department of Water and Power (LADWP) industrial station (adjacent to the existing industrial station and new AMP substation, which is located near the existing Roadability Canopy/Genset Building), as well as various substations to support either traditional or electric-powered automated operations on the 41 acres of backlands adjacent to proposed Berth 306. If the new Berth 306 backlands are used to support an automated operation in the future, an area approximately 12 acres in size within the existing backland area adjacent to the new backlands would need to be converted to a Landside Transfer Area (a delineated area where drivers and trucks wait for containers held within the Berth 306 backlands).

2.5.1.5 Development of Berth 306 41-acre Backlands

Development of the Berth 306 backlands on the 41-acres of undeveloped fill adjacent to the existing terminal would include grading; paving and striping; as well as installation of smaller substations underground electrical lines; water lines; light poles (Photograph 8 shows an example of terminal light poles); conduits to support electrical, data and phone connections; sewers; gas lines; and drainage infrastructure. This infrastructure would be adequate to support either traditional or electric-powered automated operations (or some combination of the two).

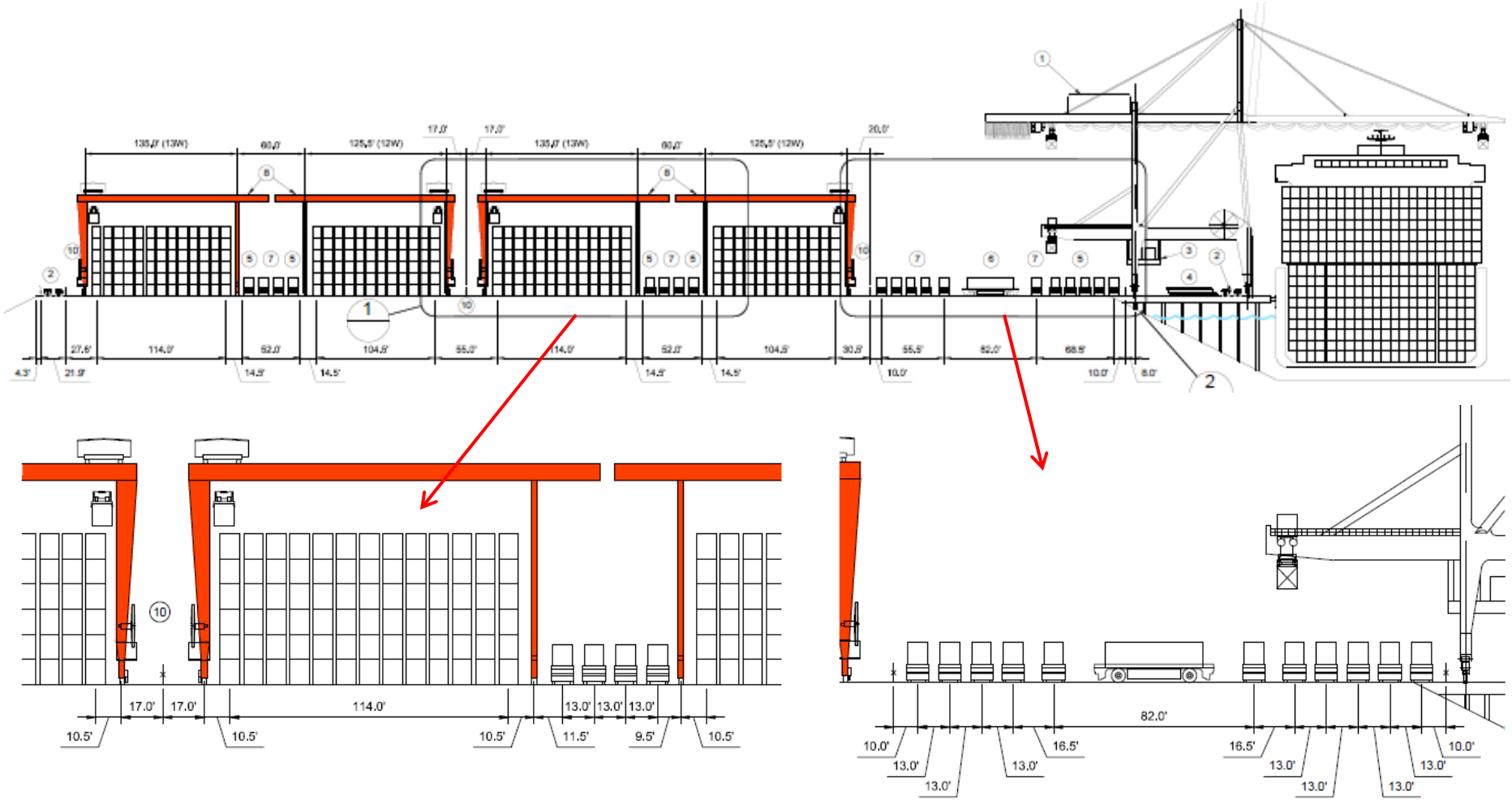
Photograph 8: Example of light poles

In addition, other infrastructure elements would be built as part of the initial Project construction that would support either a traditional or an automated 41-acre backland at a later date, such as approximately 7,100 lf of rail sets that would support RMGs or the electric Automated Stacking Cranes (ASCs), and any additional corresponding electrical distribution system.[6] The rail sets would be oriented parallel to the berth (refer to Figure 2-5 and Figure 2-6 for the preliminary conceptual design associated with the automated container operations and Photograph 9 shows an existing RMG at the on-dock railyard; the new ASCs, if installed, would likely be larger, with a cantilever on one side and sized to span a stack that is six containers high and 12 containers wide.

Construction for the rails and installation of the ASCs would involve excavation, installing concrete beams that would later support steel rails, paving, and installing conduits for electrical power and data connectivity.

Photograph 9: Rail-mounted gantry crane at the existing on-dock railyard

[6] Although additional electrical distribution would be required to operate an automated 41-acre backland, the additional power infrastructure needed to support automated operations is proposed as part of initial Project construction.



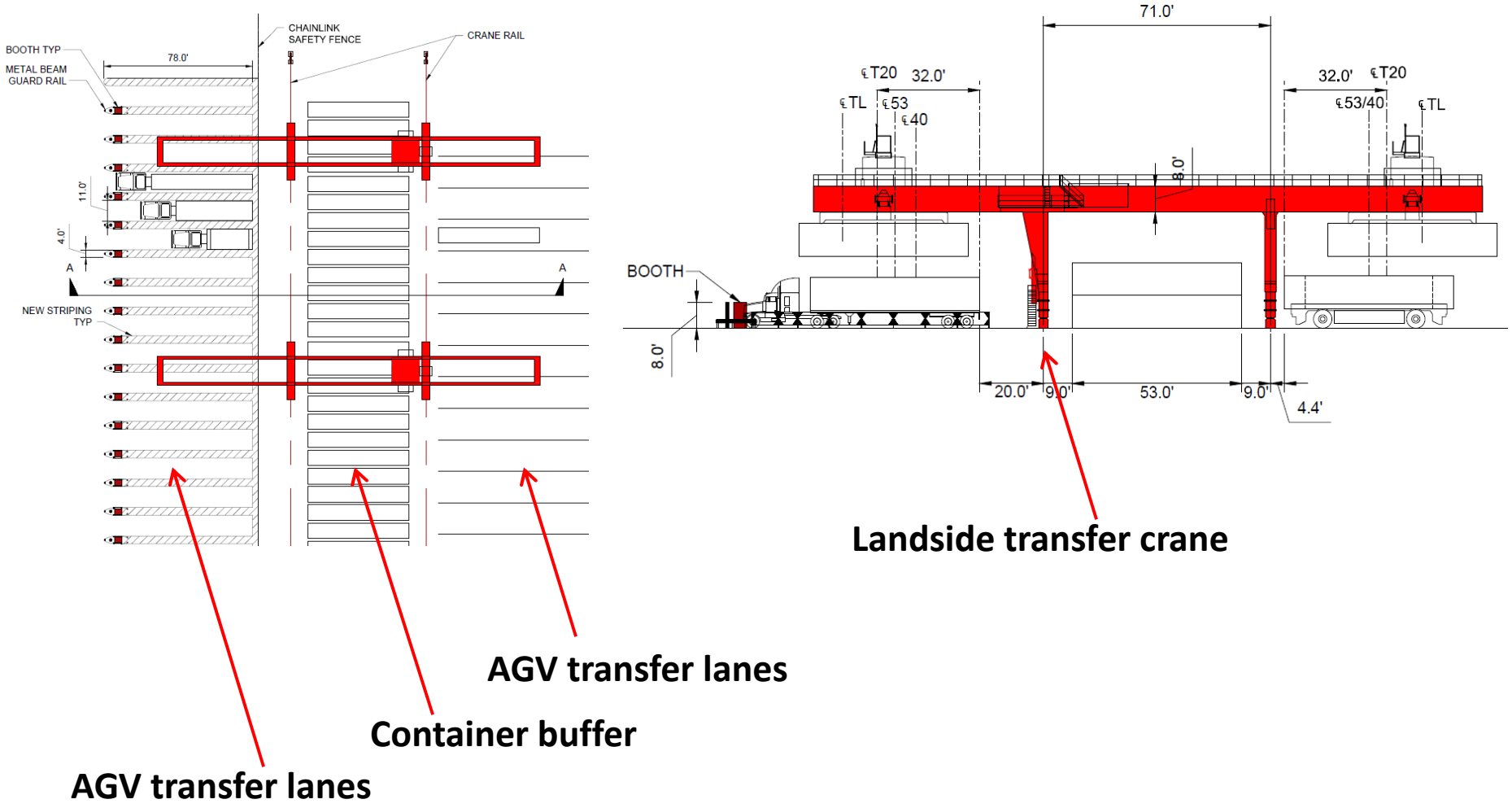
Source: APL/Moffat & Nickel, 2011

Note: These elements and their size and arragement are for disccusion purposes only

Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Proposed Layout - Sections
Figure 2-5

CDM

Automated 41-Acre Backland



Source: APL/Moffat & Nicket, 2011

Note: These elements and their size and arragement are for disccusion purposes only

If EMS determines that automated operations are feasible and cost effective for the Berth 306 backlands, additional infrastructure specific to the automated operation would need to be installed. Future installation of the automated equipment would be less complex than installation of the supporting infrastructure that has been included in the initial construction plans for the backland area. This additional work would include some asphalt grinding to flatten the finished grade and to expose the concrete beams, installation of steel rails, and installation of reefer racks (foundations with plug-in electric power) along the edge of the 41-acre area (these racks would allow refrigerated container units to be stored). Improvements to delineate and support operation of the Landside Transfer Area would also be installed adjacent to the Berth 306 backlands, including some excavation and installation of concrete rail beams to support the LTCs, pavement striping, waiting booths for drivers, and concrete curbing.

2.5.2 Project Construction

Construction of the proposed Project is anticipated to commence in 2012 and extend for approximately two years. The proposed Project would be constructed in two phases. Phase I consists of dredging, constructing the Berth 306 wharf extension, installing AMP at Berth 306, and improving the 41-acre fill site. Phase II consists of all other project modifications (Table 2-2).

Construction could take place 6 days per week (Monday through Saturday) with no construction occurring on Sundays or national holidays. In general construction would occur from 6:00 a.m. to between 4:00 to 6:00 p.m., although some night construction may occur. Table 2-2 shows the estimated construction schedule for each component of the proposed Project, by phase.

Table 2-2: Berths 302-306 [APL] Container Terminal Construction Phasing

Activity	Duration[1]	Period
Phase I (Package 1)		
Construct 1,250-foot Wharf and AMP at Berth 306[2]	22 months	Q4 2012 to Q2 2014
Dredge Channel along Berth 306	1 month	Q3 2012
Crane Delivery & Installation for Berths 302-306[3]	1 month per event	Q3 2012 and Q3 2014
Develop 41-acre Backlands at Berths 305-306	18 months	Q1 2013 to Q2 2014
Phase II (Package 2)		
Demolish the Roadability Facility	6 months	Q3 2014 to Q4 2014
Construct the Roadability and Genset Facilities	18 months	Q1 2013 to Q2 2014
Expand Power Shop facilities for Tractor Maintenance bays and a Marine Office (separate annex building)	18 months	Q1 2013 to Q2 2014
Develop 9 acres Backlands behind berth 301 (former LAXT site)	9 months	Q1 2013 to Q3 2013
Develop New Out-Gate (2 acres)	3 months	Q4 2013
Modify existing outbound lanes to inbound	3 months	Q1 2014
Modify Terminal Entrance	3 months	Q2 2014
Modify Earle St. Gate	3 months	Q1 2013
Conversion of Dry Container Storage Area to Refrigerated-Container Storage Area (to include Use of Electric Source Power)	6 months	Q1 2013 to Q3 2013
Install Infrastructure throughout Backlands	9 months	Q1 2013 to Q3 2013

Notes:
Q1, Q2, Q3, and Q4 signify the respective quarters of the year. Refer to Figure 2-7 for a visual representation of the schedule.

[1] Durations provided in this table are only for the construction period. The bid and award period is not included in the provided durations.

[2] The new wharf would add 4 acres of area to the terminal area.

[3] Eight cranes would be added to the new wharf and four to the existing wharves (Berths 302-305). Initially, four cranes would be installed in Year 2012 at Berths 302-305, with two more cranes installed in 2014 or at some point thereafter, and the remaining cranes installed after 2015, when throughput volume dictates need.

Implementation of automated container-handling operations at the 41-acre expansion area would depend largely on market demand and cost. For the purpose of the environmental analysis, the miscellaneous construction activity and construction-related emissions required to install the automated system (which includes installation of reefer racks, striping, curbing, etc.), and delivery, installation and operation of the automated equipment, is assumed to occur during year 2020. However, it is unknown whether installation and use of such equipment would be cost-effective in 2020 or at any other time.

2.5.2.1 Dredging of Berth 306

The existing depth along Berth 306 is less than 55 ft deep. The proposed Project includes dredging at the new Berth 306 to restore the depth of -55 ft MLLW plus two ft of overdredge. Dredging of Berth 306 to the proper depth would occur using an electric dredge with a clamshell dredge (derrick barge) or a crane mounted on a barge with a clamshell bucket. The barge would be maneuvered into proper position using a tug, and held in place with anchor lines. A second barge would be anchored next to the derrick barge to hold excavated dredge material. The clamshell bucket would be lowered to the sea floor, and then it would scoop and lift sediments, and place them on the storage barge. As the dredging progresses, the derrick barge would be repositioned as needed, and the dredging would continue. Once a storage barge is filled, it would be hauled by tug to an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat). If these sites are unavailable or impracticable, an ocean disposal site (LA-2) could be considered assuming the material was approved for such use by the DMMT.

2.5.2.2 Wharf Construction

Construction of the new wharf would occur sequentially and involve pile driving, formwork and wharf casting, and finish work. Once dredging has been completed, construction of the new wharf at Berth 306 would commence by driving piles in the water and on the land adjacent to the water's edge. Pile driving would occur by using a crane-mounted pile hammer, which attaches to the top of a pile. The pile would be driven into the ground by the automated hammer until it is placed at the proper depth in the underlying bedrock. For piles driven from the water, the crane would be mounted on a barge. Pile driving would proceed from one end of the new wharf area to the other.

Once a suitable number of piles have been placed, in a designated section according to design specifications, wharf construction would begin while the pile driving activity continues in the next section. Formwork for a portion of the wharf deck would be installed, and the tops of the piles cut to the proper height. Steel reinforcement would be placed in the formed area, and appropriate utility conduits and structures (such as vaults, AMP, etc.) would be placed. The formed wharf area would then be filled with concrete and allowed to cure.

A second finish pour would occur after placement of the first concrete pour. Prior to the second pour, the power trench and rail trenches required for operation of the cranes would be formed. After the second concrete layer is cured, the forms would be removed, and the crane rails installed. Power infrastructure for the cranes would also be installed.

The wharf construction process would occur in approximately 100 to 300-foot long segments and would follow the pile driving process.

2.5.2.3 Crane and Equipment Delivery

A-frame cranes would be delivered to the proposed Project site by vessel (they are constructed overseas), with approximately four cranes per ship. Once the vessel is at berth, it would be ballasted so the ship deck is at the appropriate height to off-load the cranes. A temporary ship-to-shore ramp would be constructed so that the cranes could be rolled off the vessel directly onto the wharf rail system.

Delivery and installation of proposed automated equipment would be similar to the delivery process for the cranes, which would involve delivery by vessel, placement of the equipment on the rails followed by the necessary commissioning. It is assumed that an additional six vessels within a one year period would be required to deliver the ASCs and LTCs for automated operations at the Berth 306 backlands. Due to their size, the AGVs are assumed to be delivered using regularly scheduled container ships (i.e., no additional ships would be required to deliver the AGVs).

2.5.2.4 Backlands Construction

Development of the 41-acre vacant area as backlands would be a multi-step process. The area is currently rough graded. Underground infrastructure such as utility lines, storm drains, water lines, sewers, power substation and vaults, electrical conduits, and other infrastructure would first be installed. The site would then be graded and balanced. Caissons for light structure foundations would be placed, as would electrical connectors for refrigerated units. Crushed miscellaneous base (CMB) rock would then be placed over the backland area. In addition formwork for rails (to support ASCs) would be installed, and pavement placed over the base in two layers. Pavement would be Asphalt Concrete (AC), Roller Compacted Concrete (RCC), or Portland Cement Concrete (PCC). Following paving, infrastructure would be installed or finished.

2.5.2.5 Construction of Other Improvements

Construction of other improvements such as the new gates, buildings, canopies, etc. would be accomplished using traditional building methods in the following general order: construction of foundations, installation of utilities, placement of structures, and completion of finish work. Standard demolition, trenching, paving, and construction methods would be used to construct the other terminal improvements.

Figure 2-7 illustrates and identifies the current schedule for major improvements that would occur during each construction phase.

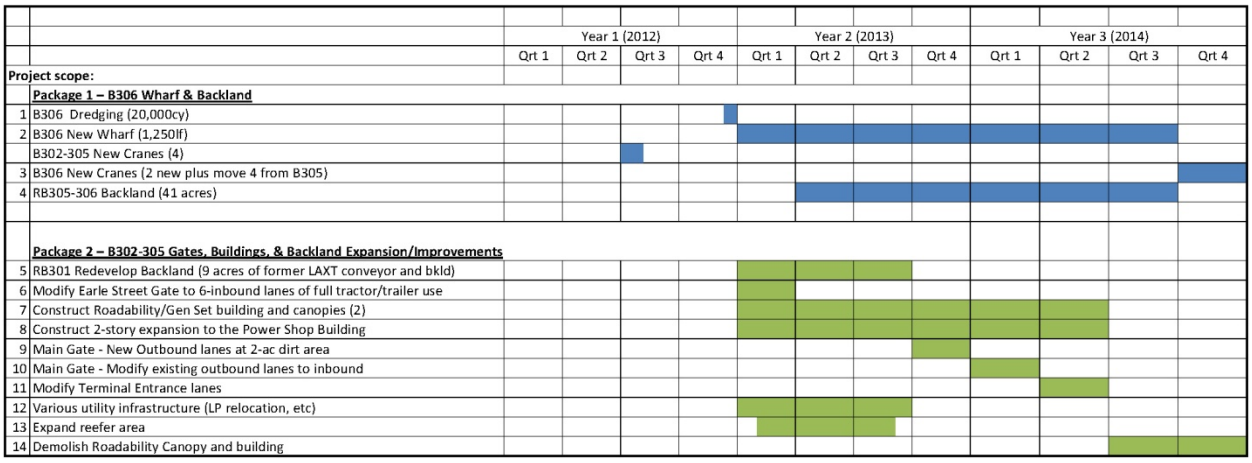


Figure 2-7: Proposed Project Terminal Construction Phases I-II

As part of the proposed Project, the LAHD would prepare a Public Services Relocation Plan to address the public utilities and services that would require relocation or otherwise be affected during the proposed Project construction. The Plan would be developed with input from the service providers for the proposed Project site and would be submitted to City regulatory departments for review and approval. Construction impacting utilities could not begin until the Plan is approved. The Plan would remain on file with the LAHD during construction, and the Construction Manager would keep a copy of the approved Plan on-site. The Plan would include the following measures:

- Prior to disconnecting any existing services, new facilities (e.g., water, sewer, communications, gas, electricity) would be installed. Pipeline installation would occur within existing utility corridors/easements;
- Minor service interruptions (defined as those lasting 1 day or less) may occur when on-site utilities are connected with in-street utility services. Impacted properties would be notified prior to any service interruption; and
- Full access to all utilities would be restored after the completion of proposed Project construction.

2.5.3 Proposed Project Operations

2.5.3.1 Permit Conditions

As part of the approvals needed for the proposed Project, EMS's existing lease would be modified to include the expanded terminal acreage. The modified lease would extend, as does the present one, to 2027. The lease would continue to require that the premises be used for activities, operations, and purposes incidental to and related to the operation of a container terminal. Specifically, the lease would prohibit the tenant from any use of the premises other than those stated above without prior approval of the Port. The existing lease would be modified after certification of the EIS/EIR. It would require compliance with all applicable laws and regulations and certain Port policies, including feasible environmental controls that are not part of the current lease. For instance, the lease would incorporate those measures adopted as mitigation based on the Final EIS/EIR, as well as measures arising from the Clean Air Action Plan, Port environmental policies, and the Port Real Estate Leasing Policy (POLA, 2007), as applicable. The USACE has the authority to place special conditions in USACE permits (requirements for mitigation) for areas within the USACE jurisdiction, and based on this, the USACE permits also would require specific mitigation measures specific to USACE permitting jurisdiction. Section 1.7.2 in Chapter 1, Introduction, describes various environmental plans and programs at the Port to reduce the environmental effects associated with operations at the Port, such as standards for terminal equipment, participation in the vessel speed reduction program, fuel requirements, AMP for a proportion of marine vessels, clean truck requirements, and other environmental measures such as storm water management, and dredging restrictions.

2.5.3.2 Terminal Operations

For purposes of evaluation, this Draft EIS/EIR assumes the APL Terminal would operate at optimal throughput capacity by 2027. At optimal throughput capacity, the improved APL Terminal could handle approximately 3.2 million TEUs per year, which represents

approximately 1,832,000 containers using a conversion factor of 1.75.[7] EMS might operate the terminal at lower TEU volumes than those described; however, an estimation of throughput based on optimal terminal capacity ensures a conservative analysis in that all reasonably foreseeable Project operations are included. Additionally, ships not belonging to APL (third-party invitees) occasionally might use the terminal. By estimating throughput based on optimal terminal capacity, the potential for such third-party ship calls is accounted for in the analysis assumptions.

Anticipated Throughput: The proposed Project would be designed to accommodate 3.2 million TEUs by 2027. This compares to an existing throughput of approximately 1.1 million TEU's in 2009 (CEQA baseline) and a design capacity of the APL Terminal of 2.2 million TEUs (NEPA baseline and No Project Alternative). While the total design capacity would be available upon completion of proposed Project construction activities, actual throughput in interim study years (2012, 2015, 2020, and 2025), would be much lower. Table 2-3 summarizes the throughput levels for the proposed Project by study year, and also includes throughput activity at the proposed Project site during the CEQA baseline year (July 2008 through June 2009) and throughput under the NEPA baseline conditions during the study years (2012, 2015, 2020, 2025, and 2027).[8]

If automated operations occur in the Berth 306 backlands, the TEU volumes for the APL Terminal in 2027 would be the same as they would be under traditional container terminal operations. The Port has prepared a white paper assess the capacity of the terminal under automated conditions in the Berth 306 backland area. The white paper can be found in Appendix C2. The main difference between traditional terminal operations and automated terminal operations is that with a traditional terminal, containers are moved to and from the dock at shipside and to from the backlands by diesel equipment driven by human operators whereas with automated operations the containers would be transported to and from the dock at shipside to and from the backlands by computer operated electric vehicles.

Ship Operations: The operation of container vessels, their loading and unloading, and the handling of containers in the terminal are described in Section 1.2.2.1.1 in Chapter 1, Introduction. Normally, no more than three of the largest vessels would be berthed at the terminal wharf at one time; however, after construction of Berth 306, up to four vessels could be berthed at the same time. By intent and design, shipping companies deploy vessel strings (schedules) that are spread to avoid berth overlaps. This method allows the ship to be processed faster while in port because the maximum number of cranes and gangs can be dedicated to each ship.

To accommodate an annual throughput of approximately 3.2 million TEUs in 2027, 390 annual ship calls and associated tugboat operations would be required. For the APL Terminal, one tug generally is required each for ship docking and undocking, for a total of two tugs per call, or 780 tugs operations annually. In less than one percent of cases,

[7] The throughput conversion factor used here represents an APL specific conversion factor and is discussed in more detail in Chapter 1, Section 1.1.2.1.

[8] The NEPA baseline represents the set of conditions that would occur without Federal action, such as a permit from the USACE. Under the NEPA baseline, terminal throughput is expected to grow over time to accommodate future projected containerized throughput, and therefore, different levels of terminal operation would occur at each study year (2012, 2015, 2020, 2025, and 2027). The NEPA baseline in 2027 is equal to the capacity of the existing APL Terminal.

[9] The conversion of containers to TEUs is based on an APL Terminal-specific factor of 1.75. In other words, 65 containers being sent via rail multiplied by the 1.75 factor equals approximately 114 TEUs.

two tugs are needed during docking/undocking due to equipment malfunction or by request of the ship's pilot. In these rare instances, up to four tugboat operations would be required for a single ship call. As occurs today, tugboats would be able to dock at terminal facilities in between trips, reducing tug emissions associated with travel back to their docking facilities. Table 2-3 summarizes the anticipated ship calls for the Project by study year, and for the CEQA and NEPA baselines.

Truck Operations: Currently about 24 percent of Port-wide cargo throughput passes through on-dock rail facilities, 8 percent through near-dock rail facilities, and the remaining 68 percent via truck to the local and regional markets (and off-dock facilities) (Parsons, 2005). However, the mode split at individual terminals can vary. Mode splits differ from terminal to terminal on the basis of the existence and capacity of a terminal's on-dock rail facility, as well as the demands of shipping lines, which are sensitive to the downstream market. The existing APL Terminal transports a relatively high percentage of the containers handled at the site via on-dock rail compared to the Port as a whole. Mode splits at the APL Terminal are presently 35 percent through on-dock facilities, 11 percent through near-dock facilities, and 54 percent by truck. Table 2-3 summarizes the anticipated mode split percentages for the Project by study year, and for the CEQA and NEPA baseline years.

Port-wide, by 2027, between 30 to 33 percent of the TEUs are expected to travel to and from terminals by on-dock rail, between 7.5 to 12.5 percent are expected to travel to and from the terminal via truck to near-dock and off-dock railyards, and the remaining cargo volumes are anticipated to travel by truck to the local and regional market (i.e. markets within an approximately 700-mile radius from the Port) (POLA, 2009). As previously explained, the percentage of TEUs expected to travel by on-dock rail verses by truck differ from terminal to terminal because each terminal has different on-dock rail capacities, in addition, each shipping line is subject to different market pressures and logistics.

Under the proposed Project, mode splits at the APL Terminal after year 2020 are expected to change slightly as throughput via the on-dock facility reaches its maximum capacity. The percentage of cargo passing through the on-dock facility at the APL Terminal is expected to decrease to approximately 32 percent by 2027. The maximum annual capacity of the current on-dock facility at the APL Terminal is estimated to be 1.04 million TEUs; and given rising levels of throughput expected at the terminal in years 2025 and 2027 (see Table 2-3), on-dock throughput splits in years 2025 and 2027 would be slightly less than 35 percent. Specifically, the on-dock/near- dock/truck distribution delivery splits anticipated to occur at the terminal is 33/12/55 percent respectively in year 2025, and 32/13/55 percent respectively in year 2027.

Based on the anticipated mode splits for the proposed Project, the design capacity throughput of 3.2 million TEUs in 2027 would require a total of 11,361 peak daily truck trips and 2,953 annual one-way-rail trip movements. Those trips would include cargo hauled entirely by truck (principally within southern California, with some trips to and from northern California, Arizona, Nevada, and Utah), and intermodal cargo bound for, or coming from, locations farther east. Table 2-3 summarizes the anticipated truck trips and rail trips associated with the proposed Project by study year, and for the CEQA and NEPA baselines. Of the approximately 2.17 million TEUs transported by trucks in 2027, approximately 405,000 TEUs (approximately 23 percent) would be intermodal cargo trucked to nearby dock railyards. Draying containers to near- and off-dock facilities

could become necessary because all the containers on a train that is assembled in the on-dock railyards are bound for the same destination, meaning containers bound for other locations are hauled to nearby dock facilities to be grouped with containers from other terminals bound for that same destination. Trucks would haul those containers on public highways to and from off-site railyards, including the Union Pacific Carson ICTF, the Burlington Northern Santa Fe Hobart Yard in Vernon, and the Union Pacific East Los Angeles Yard. Local and national (minimal long-haul trips) containers would be hauled to and from the terminal gates by trucks.

In addition to the above assumptions regarding transportation mode splits, assumptions regarding the timing distribution of truck trips were developed based on on-going Port-area transportation studies. Truck traffic throughout the Port in 2008 was distributed as follows: 80 percent day shift (8:00 a.m. to 5:00 p.m.), 10 percent night shift (5:00 p.m. to 3:00 a.m.), and 10 percent "hoot shift" (3:00 a.m. to 8:00 a.m.). The overall 80/10/10 percent split assumption was determined jointly by the Ports of Long Beach and Los Angeles staff, based on operational reports. However, each terminal has distinct operating characteristics, which may differ from the Port-wide composite. While EMS anticipates loading and unloading vessels during the hoot shift in 2027, it does not anticipate operating the gate or railyard during this shift. Truck traffic through the APL Terminal gate in 2008 was distributed as follows: 60 percent day shift (8:00 a.m. to 5:00 p.m.), 40 percent night shift (5:00 p.m. to 3:00 a.m.), and no activity during the hoot shift (3:00 a.m. to 8:00 a.m.). In year 2027, the split is expected to be 55/45/0. For purposes of environmental review, this assumed future distribution (55 percent day, 45 percent night) is conservative in that it would tend to result in higher traffic impacts than a 50/50 day/night distribution.

Table 2-3: Project Throughput Comparison

	NEPA Baseline					CEQA Baseline[a]	Proposed Project				
	2012	2015	2020	2025	2027	July 08-June 09	2012	2015	2020	2025	2027
Terminal Acreage	291	291	291	291	291	291	291	347	347	347	347
TEUs per Acre	6,550	6,695	6,988	7,281	7,399	3,877	6,550	7,787	8,392	8,997	9,239
Total Annual TEUs[b]	1,906,000	1,948,201	2,033,536	2,118,871	2,153,000	1,128,080	1,906,000	2,702,000	2,912,000	3,122,000	3,206,000
Annual Ship Calls	234	234	234	286	286	247	234	286	338	364	390
Daily Truck Movements (peak)	6,438	6,581	6,869	7,157	7,273	5,093	6,438	9,127	9,836	10,892	11,361
Annual Truck Trips[c]	1,701,940	1,739,620	1,815,820	1,892,020	1,922,500	998,728	1,701,940	2,412,720	2,600,240	2,879,170	3,003,160
Annual Rail Movements[d]	2,197	2,221	2,270	2,317	2,336	1,676	2,197	2,627	2,831	2,876	2,953
% TEUs by Truck[e]	55	55	55	55	55	54	55	55	55	55	55
% TEUs to Near/Off Dock Rail [f]	10%	10%	10%	10%	10%	11%	10%	10%	10%	12%	13%
% TEUs by On-Dock Rail	35%	35%	35%	35%	35%	35%	35%	35%	35%	33%	32%
Number of Cranes[g]	12	12	12	12	12	12	16	18	24	24	24
# Terminal Employees [h]	1,161	1,188	1,231	1,275	1,292	1,041	1,161	1,733	1,908	2,083	2,152

a The CEQA Baseline is the period from July 2008 through June 2009.

b Throughput forecasts conservatively estimate maximum capacity will be reached by 2027 so as to ensure environmental impacts are not underestimated.

c Annual truck trips were determined by the QuickTrip port terminal truck trip generation model, which uses truck trip generation rates from the Port of Los Angeles Baseline Transportation Study (2004) to determine a terminal's truck trips based on its TEU throughput by regional truck, on-dock rail intermodal and off-dock rail intermodal.

d Estimated annual rail one-way trips. Includes both on- and near-dock rail. Calculation extrapolated from annual TEU figures specified by Rail Master Plan and actual on-dock railyard projections. Assumes 414 TEUs per outbound trip and 114 TEUs per in-bound trip, and 1.75 TEUs per container or 302 TEUs per round train trip.

e Truck trips distribution based on current percentage rounded and projected forward. Assumes 10% to near dock rail, 55% are local/regional delivery, and 35% are on-dock

f Appendix C1.

g This schedule represents a conservative but likely assumption regarding the phasing of cranes.

h Information for existing and future direct employees were provided or projected by EMS, 2010.

Rail Operations. The on-dock railyard at the existing terminal would handle a portion of the increased cargo from the expanded APL Terminal. According to the Ground Transportation analysis done for the proposed Project, as well as the Port Rail Master Plan, the existing railyard at the APL Terminal could handle approximately 1.04 million TEUs annually.

As occurs under existing conditions, containers would be hauled by yard tractors between the vessel berths and the on-dock railyard (Photograph 10 shows a yard tractor at the existing APL Terminal). At the railyard, containers would be lifted on and off railcars by mobile cranes or RMG cranes. The railyard would operate 24 hours per day; 365 days per year, as it does now, and could accommodate two double-stack unit trains each day. Although each train, both inbound and outbound, could carry a maximum of 250 containers (with each container measuring 40 ft long), the trains usually carry a mix of containers, including those 20-ft long, and fewer than the maximum number of containers due to weight considerations. A more realistic estimate is that each inbound train trip (into the Port) transports an average of 65 containers (114 TEUs) plus empty railcars, while each outbound train trip (to inland locations) transports an average of 237 containers (415 TEUs), for an average of 151 containers (264 TEUs) per round trip (EMS, 2008).[9]

Photograph 10: Yard Tractor

Rail operations at on-dock railyards involve a number of entities. The terminal operator moves containers to and from the on-dock facility. Containers are off-loaded and loaded directly from and onto train components known as wells, with each well capable of carrying two 40-foot containers (Photograph 11 shows containers stacked on wells beneath an RMG at the existing on-dock railyard). Five wells make up a railcar, and each railcar is then coupled with other railcars traveling to the same destination. The coupled railcars are called a unit train. Unit trains vary in length between 21 and 28 railcars (105 and 140 wells). The average on-dock train length at the APL Terminal is 15 railcars (75 wells), or 4,725 ft, and this figure would not change under the proposed Project. These unit trains are usually built by Pacific Harbor Line (PHL). PHL is a third party, independent rail company that provides rail transportation, yard switching, maintenance

[9] The conversion of containers to TEUs is based on an APL Terminal-specific factor of 1.75. In other words, 65 containers being sent via rail multiplied by the 1.75 factor equals approximately 114 TEUs.

and dispatching services to the Port Complex. PHL manages all rail dispatching and switching functions at the on-dock railyards at the two ports, including:

- Scheduling and overseeing all train movements;
- Organizing railroad cars carrying containers of imported goods and switching them onto various tracks to form unit trains;
- Breaking down unit trains arriving at the ports, switching railroad cars onto various tracks and distributing them to nine marine terminals where containers are loaded onto ships for export;
- Maintaining 60 miles of railroad tracks within the Port Complex; and
- Breaking and storing railroad cars awaiting dispatch.

Photograph 11: Stacked containers in rail car wells

The Port is served by two Class 1 railroads, Burlington Northern Santa Fe (BNSF) and Union Pacific (UP), often referred to as the 'main line' or 'line-haul' rail companies. After PHL has built a unit train, BNSF or UP will hook up their line-haul locomotive(s) to the train and pull the train out of the on-dock railyard on to the main-line tracks to the eventual destination. PHL locomotives will occasionally pull portions of a unit train out of the on-dock facility to one of the near dock ICTFs. A loaded double-stack train is typically pulled by three or four line-haul locomotives, although, if PHL pulls the train, it would be hauled by two or three smaller locomotives.

PHL contracts with the Ports of Los Angeles and Long Beach to operate the centralized traffic control (signaling) system. Agreements with BNSF and UP for international cargo are usually handled by the shipping lines. Many shipping lines have a contract with both BNSF and UP.

Cargo-handling Equipment. Under the proposed Project, an increase in the number of some pieces of cargo-handling equipment would be required to process the increased throughput. The current and future equipment inventory is described by the following:

- Forklifts (36 in 2008, 46 in 2027);
- RMG cranes (10 in 2008, 10 in 2027);
- Rubber-tired Gantry Crane (8 in 2008, 8 in 2027);
- Side picks (7 in 2008, 7 in 2027);
- Top handlers (19 in 2008, 27 in 2027); and
- Yard tractors (195 in 2008, 285 in 2027).

Cargo-handling equipment have useful operating lives, which correspond to the period during which continued operation, with routine maintenance and periodic retrofits, is still cost-effective. At the expiration of useful operating lives, items of equipment would be replaced. EMS has adopted a schedule for equipment replacement consistent with the retrofit schedule adopted by CARB. Specifically:

- Forklifts would be replaced approximately every twelve years;
- RMG cranes would be replaced approximately every thirty years;
- A-frame cranes would be replaced every 30 years;[10]
- Rubber-tired gantry cranes (see Photograph 12) would be replaced every twenty-five years;
- Side picks (see Photograph 13) would be replaced every twelve years;
- Top handlers (see Photograph 14) would be replaced every twelve years;
- Yard tractors (see Photograph 10 above) would be replaced every seven years; and
- Miscellaneous diesel equipment would be replaced every twelve years.

[10] RMGs and A-frames are not expected to be replaced as a normal course of business during the length of the lease

Photograph 12: Rubber Tire Gantry Crane

Photograph 13: Side pick

Photograph 14: Top pick or handler

Operation of the 41-acre Backland Area Adjacent to Berth 306. Because it is not certain as to whether or when use of an automated system would commence, for the purposes of environmental review, the EIS/EIR assumes that either (1) the terminal would continue to operate using traditional operations throughout the lease term; or (2) the operation of the 41-acre backland would transition from a traditional operation (i.e., transport of containers by mostly diesel-powered equipment) to an automated operation with mostly electric equipment during the lease term. Following is a description of traditional and automated backland operations:

Traditional Backlands

The existing APL Terminal operates using "traditional" methods for container terminal operations. As detailed in Section 1.2.2.1.1 in Chapter 1, Introduction, under the traditional operations, 1 to 10 cranes (depending on the size of the ship and availability of the cranes) operating simultaneously unload or load one ship. Once containers have been off-loaded from the ship or received through the gates on trucks and trains, the containers are stored and moved around the backlands area of the terminal (the storage yards) using cargo-handling equipment that may include electric- or diesel-powered RMGs, diesel-powered RTGs, and/or diesel-powered sidepicks, toppicks, and yard tractors. Through the use of this handling equipment, containers are stored by stacking containers on top of each other, up to five containers high, with the bottom container placed directly on the ground, or with a container stored directly on a chassis (trailer). All of the unloading/loading equipment used in the traditional backland operations is performed and operated by workers. A majority of the equipment used in the traditional operations is diesel-powered.

Automated Backlands

The Ports of Los Angeles and Long Beach have developed a roadmap for moving forward with the identification, evaluation, and integration of zero emission technologies for goods movement. It is foreseeable that a technology change could result in replacement of some of the traditional backland operations at the APL Terminal through

the use of an automated container handling system on the 41-acre backland area adjacent to the proposed Berth 306. If installed, such a system would involve the use of semi-automatic dual hoist electric shore side gantry cranes, AGVs, electric ASCs, and semi-automated electric LTCs. Figure 2-5 and the following Figure 2-6 show a preliminary conceptual design associated with the potential automated container operations.

Once the vessel arrives at the berth, the cranes would begin unloading containers from the vessel. Each crane would have a dual trolley with spreaders - a ship trolley and a shore trolley. The ship trolley would lift the container from the vessel to a platform on the crane where the Inter-Box-Connectors (IBCs) would be removed from the container. The shore trolley would then lift the container from the coning platform to an AGV that is positioned directly to the rear of the crane. The AGV would receive wireless instructions and proceed through the use of sensors below the ground surface to a pre-assigned location in the backlands area. Once the AGV arrives at the correct location, an ASC would lift the container from the AGV and place it in the appropriate location.

When a customer's truck arrives at the terminal to pick up an import container, the truck would proceed to the Landside Transfer Area adjacent to the backlands area. The Landside Transfer Area would be comprised of parking stalls for the trucks delivering or receiving of containers from the 41-acre backland area adjacent to Berth 306, LTCs for the delivery and receiving of containers, and parking stalls on the backland area for AGVs to park. A truck would back into a stall with a chassis, and the driver would exit the truck and enter a booth. An AGV would then proceed to the appropriate grounded location of the container and an ASC would lift the container from the grounded location to the AGV. The AGV would proceed to the Landside Transfer Area and arrive at an AGV stall. The LTC would then lift the container from the AGV and move it by trolley to a position near the chassis, then land the container onto the chassis. The driver of the truck would re-enter the truck and proceed to the Out Gate. The container handling process for loading export containers would be handled in the same manner but in the reverse direction.

With the exception of the operator of the A-frame/shore side gantry crane, the automated backlands would be unmanned and fully automated. The automated system would be operated from a remote facility (such as the remodeled/expanded Power Shop). With the exception of the diesel/electric AGVs, all or part of the equipment used would be electric.

While infrastructure to support electric and automated equipment would be installed as part of the initial proposed Project improvements by 2013, the timing of the installation, integration, and operation of the automated equipment on the 41-acre backlands area would depend largely on market demand and cost.

Although no date is certain, for this environmental analysis, the construction effects of the installation of additional infrastructure and equipment necessary for automated operations on the 41-acre are assumed to occur around 2020. However, it is unknown whether installation and use of such equipment would be cost-effective in 2020 or at any other time.

The potential environmental impacts associated with the operations of the Berth 306 backlands as a traditional container terminal are quantified under each environmental

resource area. This is the most conservative approach for estimating the environmental impacts associated with the proposed Project operations. Where impacts associated with automated operations could differ from impacts associated with traditional operations, the impacts of automated operations at the backland area adjacent to Berth 306 also are addressed at full build-out in 2027, based on the information available from the conceptual designs.

Terminal Operating Hours

Currently, APL Terminal operations occur 360 days per year in two 8-hour shifts and one 5-hour shift per day, 7 days a week. The two 8-hour shifts can be extended to two 10-hour, overlapping shifts if operations so demand. For the 5 days of the year where the marine terminal does not operate, rail operations and mechanics at the on-dock railyard continue to operate 24 hours per day. The unloading and loading of ships (and supporting operations in backland areas) follows the schedule described above except that, during the hoot shift, only mechanics and security personal are working. Meanwhile, gate operations do not occur on Friday nights, Saturday nights, Sunday days, and Sunday nights, and not at all during the hoot shift. To facilitate these operations, the terminal directly employed up to 599 workers during the day, up to 407 at night, and 35 in the hoot shift in the CEQA baseline period July 2008 – June 2009.

In 2027, terminal operating hours are expected to change from those existing in 2008. Along with other terminals in the Port, EMS expects to load and unload ships and operate their gates during all three shifts in the future.

By 2027, terminal employees are expected to increase from a peak daily total of up to 1,041 in the CEQA baseline period to approximately 2,152 in 2027 (926 workers during the day, up to 849 at night, and up to 377 in the hoot shift). The terminal is run as a continuous operation, in which more employees are hired to supplement operations as needed. Thus, the terminal is expected to operate 24 hours a day (*i.e.*, with cargo operations occurring 24 hours per day) at a fairly consistent level of services.

2.6 Analysis Baselines

To determine significance, impacts expected to result from implementation of the proposed Project and each alternative are compared to a baseline condition. The difference between the conditions expected with the proposed Project/alternative and the baseline level is then compared to a threshold to determine if the difference between the two is significant. As discussed in Section 1.6.5, the NEPA lead agency and CEQA lead agency are using different baselines against which to determine significance.

The baselines used to analyze the impacts of the proposed Project and alternatives are described below and are illustrated conceptually in Figure 2-8. The illustration compares the scenarios on the basis of cargo throughput (i.e., TEUs), but the concept applies to each type of impact, for example tons of air emissions or noise levels. The NEPA baseline changes over time in response to increases or decreases in activity or other factors that would occur at the proposed Project site absent federal action, in this case issuance of a USACE permit. The illustration shows that the CEQA baseline remains fixed for the duration of the Project, reflecting conditions that occurred in the baseline year of July 2008 to June 2009. The fundamental difference between how the CEQA baseline is characterized and how the NEPA baseline is characterized are described

below in Sections 2.6.1 and 2.6.2. Given that the baselines are different, review under NEPA and CEQA could reach different conclusions concerning impacts at a given point in time from the same project activity.

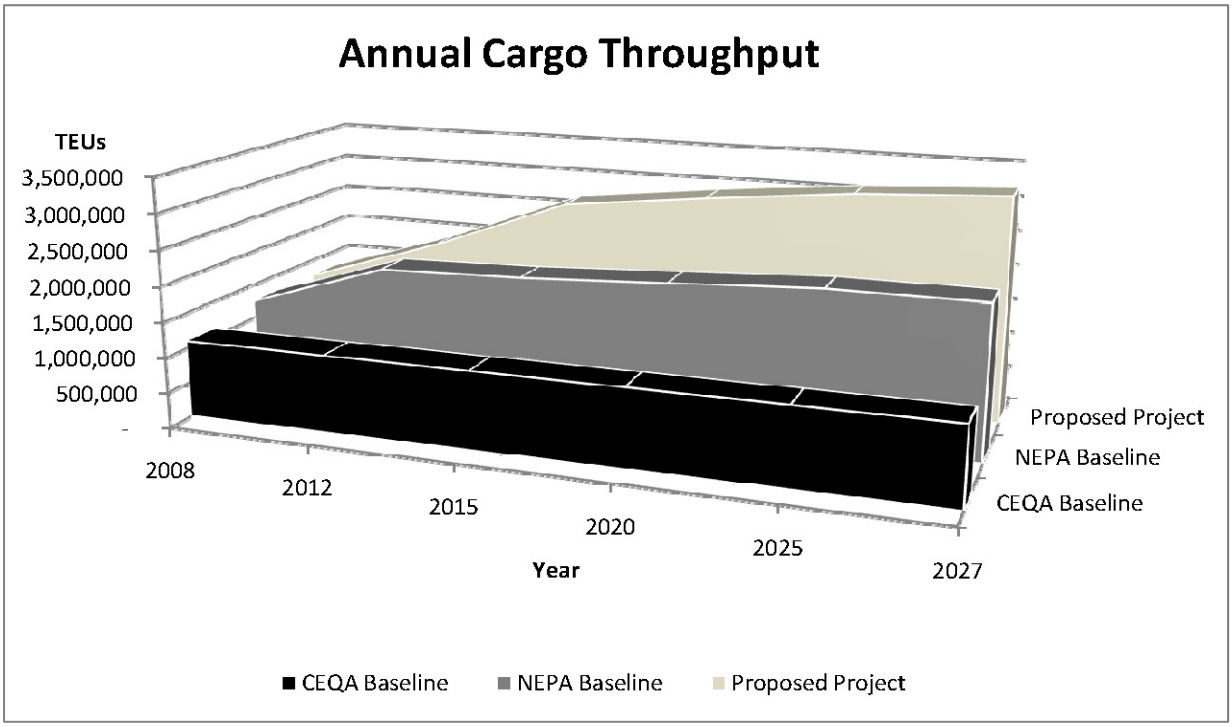


Figure 2-8: Comparison of Baselines and Proposed Project

2.6.1 CEQA Baseline

CEQA provides for an EIR to assess the significance of a project's impacts in comparison to a baseline that consists of the existing physical environmental conditions at and near the project site. Baseline conditions are normally, but not always, measured at the time of commencement of environmental review of the proposed project. CEQA Guidelines, Section 15125, subdivision (a), provides:

> *An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.*

For this EIS/EIR, the CEQA baseline is the set of conditions that prevailed at the time the Notice of Preparation (NOP) was published, which was July 2009. The CEQA baseline takes into account the throughput for the 12-month period preceding July 2009 in order to provide a representative characterization of activity levels throughout the year. The Port accounts for throughput data over the course of a year even though throughput can vary from month to month. The Port follows this practice in describing baseline conditions and in describing projected throughput under a proposed project, to allow an

"apples-to-apples" comparison for future year conditions. For purposes of describing CEQA baseline conditions, therefore, this document utilizes the throughput volume that occurred at the Berths 302-305 during the yearlong period from July 2008 through the end of June 2009. For this 12-month period, the APL Terminal encompassed approximately 291 acres, 3.5 berths (Berths 302-305) and 12 A-frame cranes. The terminal during this time handled approximately 1,128,080 (or 1.13 million) TEUs and generated 998,728 annual truck trips. The CEQA baseline represents conditions at a fixed period in time; hence, the aforementioned characteristics at the proposed Project site do not change in the CEQA baseline.

2.6.2 NEPA Baseline

Section 1.5.1 in Chapter 1, Introduction, presents the scope of the NEPA analysis and basis for the NEPA baseline. The evaluation of significance under NEPA (in an EIS) is defined by comparing the proposed Project or Project Alternative to the No Federal Action Alternative or the NEPA baseline scenario in future years. The NEPA baseline is not bound by statute to a "flat" or "no-growth" scenario; rather, it includes activities that would occur absent a federal action, including increases in operations over the life of a project. The No Federal Action and the NEPA baseline are typically equivalent, as they are in this case, and represent the set of conditions that would occur without Federal action, in this case issuance of a USACE permit. However, the NEPA baseline could include improvements that require a local action. Here, the NEPA baseline includes only the following terminal improvements:

- The conversion of a portion of the dry container storage unit area to storage for an additional 200 refrigerated container unit (reefers), and associated electrical infrastructure.
- Installation of utility infrastructure at various areas in the backlands (e.g., relocation of light poles).

The NEPA baseline would also not include any new dredging or any associated ocean transport and disposal of dredged material, wharf construction, or installation and operation of additional cranes. Maintenance dredging would occur separately under separate approval. However, under the NEPA Baseline scenario, the existing lease would remain in place and current operations would continue at the existing container terminal, including growth estimates described below.

Under the NEPA baseline, up to 2,153,000 (or 2.15 million) TEUs could be handled at the Berths 302-305 by 2027, along with associated ship calls (286), tug boat trips (572), truck trips (1,922,497 per day), and rail trips (2,336 one-way trips), without any federal action. Because the NEPA baseline is dynamic, it includes different levels of terminal operations for each study year (2012, 2015, 2020, 2025, and 2027).

The NEPA baseline assumes implementation of existing and future CAAP measures and that mitigation measures related to the activities listed above would be applied, if they prove necessary, to reduce any significant emissions from yard tractors and yard equipment used at Berths 302-305. In addition, any future Port-wide CAAP measures are assumed as implemented under the NEPA baseline.

2.7 Federal Scope of Analysis

As presented in Section 1.5.1, under federal law, "the [USACE] district engineer should establish the scope of the NEPA document to address the impacts of the specific activity requiring the Department of the Army (DA) permit and those portions of the entire project over which the district engineer has sufficient control and responsibility to warrant Federal review" (33 C.F.R Part 325 Appendix B). The four factors considered in determining "sufficient control and responsibility" include:

1) Whether or not the regulated activity comprises merely a link in a corridor-type project
2) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity that affect the location and configuration of the regulated activity
3) The extent to which the entire project will be within USACE jurisdiction
4) The extent of cumulative federal control and responsibility

Therefore, determining the federal scope of analysis for the proposed Project involves evaluating all four factors. The "impacts of the specific activity requiring the DA permit" are the direct impacts (i.e., those regulated impacts occurring in, over, and/or under waters of the U.S.); while indirect impacts are those impacts occurring in the upland portions of the project area over which there is sufficient federal control and responsibility to warrant inclusion in the federal scope of analysis.

With respect to the first factor, the proposed Project is a container terminal expansion project, which consists of wharves, associated cranes, backlands/container yard, and entry/exit infrastructure. Thus, it is not "merely a link" in a corridor-type project, such as a highway or a utility line crossing.

Considering the second factor, as an existing container terminal in the Port of Los Angeles, there is a physical link between the upland container yard/backlands and the adjacent wharves and associated cranes in and over waters of the U.S. that service APL's approved third-party ships, which move containers into and out of the port. While this consideration might suggest expanding the scope of analysis to include the upland container yard/backlands, the existing APL Terminal is a fully functioning, approximately 300-acre container terminal that has been operating at this location for many years, and, as such, many of the upland impacts that would occur at the site under the proposed Project represent continuations of impacts that are already occurring and would occur regardless of whether the USACE regulated activities are implemented, as well as growth in operations at the existing terminal up to the point at which the terminal reaches its capacity. The exception is the improvement of the 41-acre landfill adjacent to the southeast corner of the existing terminal which was created by the Channel Deepening Project in 2005. While this area could be used for temporary storage of containers without federal action, the proposed Project includes developing it as a permanent backland feature, as well as developing the adjacent new Berth 306.

Because the existing APL Terminal is a fully functional, operating terminal with previous and ongoing air, traffic, biological resource, water resource, and other impacts occurring over the majority of the terminal site, it is unlike the new shipping terminal example

provided in 33 CFR 325 Appendix B Section 7(b)(3) ("…a shipping terminal normally requires dredging, wharves, bulkheads, berthing areas and disposal of dredged material in order to function. Permits for such activities are normally considered sufficient Federal control and responsibility to warrant extending the scope of analysis to include the upland portions of the facility").

In evaluating the third factor, the extent of waters of the U.S. that would be affected by the proposed Project it was concluded that the proposed Project would affect a relatively small portion (approximately 5 acres to create Berth 306, including construction dredging) of the approximately 350-acre project area.

For the fourth factor, other than the requirement to obtain a USACE permit, there is no other federal involvement on this site, such as use, transfer, or sale of federal property; federal funding including cost sharing, guarantee, or financial assistance; or the involvement of federally listed historic resources, threatened or endangered species, designated critical habitat, or other federally recognized natural resource areas, which would suggest that broadening the federal scope of analysis is warranted. Other federal agencies exert no control over the environmental effects of land development on the upland portions of the proposed Project area. Furthermore, the federal and non-federal portions of the proposed project could exist independently of each other. State and local regulations primarily control the design of the proposed project, and this project is being subject to extensive state environmental review. In short, the environmental consequences of the larger project are not essentially products of the federal action. Rather, they are primarily the product of non-federal interests and designs.

Considering all four factors, the USACE has determined that the federal direct and indirect scope of analysis should consist of: 1) work (including construction dredging) and placement of structures in or over waters of the U.S., 2) impacts to the adjacent upland area expected to be used temporarily for staging and storage of equipment and materials to complete the in-water and over-water activities (i.e., an approximately 100-foot-wide strip of upland area adjacent to the shoreline), and 3) development and use of the 41-acre landfill constructed as part of the Channel Deepening Project for container terminal operations (shown in Figure 2-2). The federal analysis would also include any ocean transport and disposal of the dredged material to designated ocean disposal site(s), as well as any beneficial reuse of dredged material in waters of the U.S.

The USACE has no authority or responsibility to regulate activities, such as upland operations, that are presently occurring or could occur absent a USACE permit. These activities and resulting conditions, therefore, comprise the NEPA Baseline, which is discussed in Section 2.6.2 of the EIS/EIR.

The scope of analysis for evaluating cumulative impacts is addressed in Chapter 4, Cumulative Analysis, of this EIS/EIR.

2.8 Alternatives

2.8.1 Alternatives Evaluated in this Draft EIS/EIR

This document evaluates a reasonable range of alternatives to the proposed Project. The identification by the Port and USACE of a reasonable range of alternatives is informed by the legal mandates of the Port and the USACE. The Port is one of only five locations in the state identified in the Coastal Act (PRC Sections 30700 and 30701) for the purposes of international maritime commerce. These mandates identify the Port and its facilities as a primary economic/coastal resource of the State and an essential element of the national maritime industry for promotion of commerce, navigation, fisheries, and operations of a harbor. Activities are typically water dependent and the Port is required to give highest priority to navigation, shipping and necessary support, and access facilities to accommodate the demands of foreign and domestic waterborne commerce. Leaving the premises vacant for any extended time is not consistent with the legal mandates of the Port. Based on existing demand and capacity limitations on industrial Port uses and Trust purposes, all or most of the industrial facilities adjacent to deep water are needed to accommodate maritime commerce, specifically containerized cargo over the long term.

In addition to the proposed Project, 23 alternatives were considered during preparation of this Draft EIS/EIR. These considerations included alternative terminal configurations, alternative uses of the terminal area, and alternative locations for the terminal and various project components. Of these, six alternatives (in addition to the proposed Project) with the potential to meet most of the proposed Project objectives have been carried forward for detailed co-equal analysis in Chapter 3, Environmental Analysis.

This section presents, first, a description of the six alternatives that are carried forward in the detailed impacts analysis, and then describes the remaining 16 alternatives that were considered but eliminated from further discussion (including the rationale for the decision to eliminate the alternatives from detailed analysis). Figures 2-9a and 2-9b illustrate the details of each of the six alternatives (such as wharf alignments, fill, and number of cranes) that are evaluated in Chapter 3, and Table 2-4 provides a summary of the quantitative differences in the construction and operation of the proposed Project and each of those alternatives at full build-out in 2027.

A more detailed description of each alternative, along with a general discussion of how the characteristics of the alternative would result in impacts different from those of the proposed Project, is provided.

Alternative 1 - No Project

Alternative 2 - No Federal Action

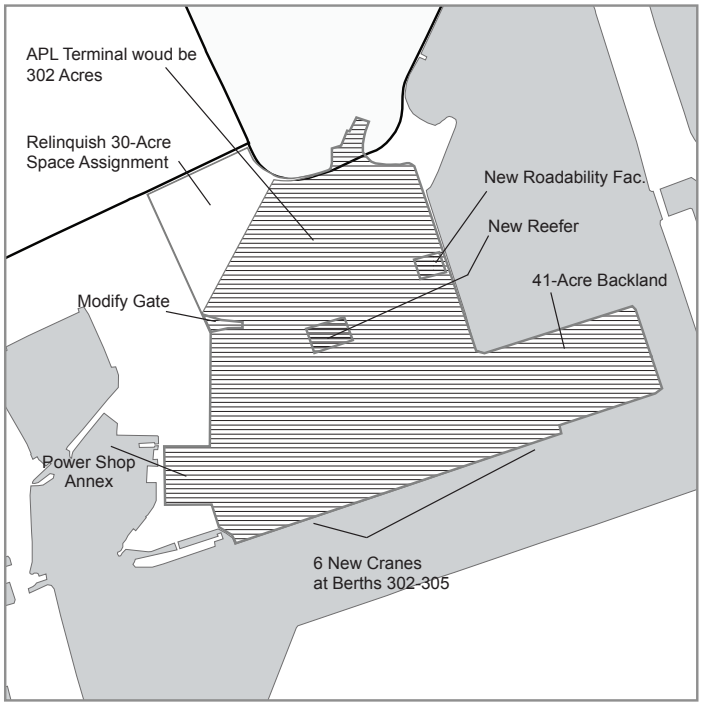
Alternative 3 - Reduced Project: Four New Cranes

Note: Figures Not to Scale

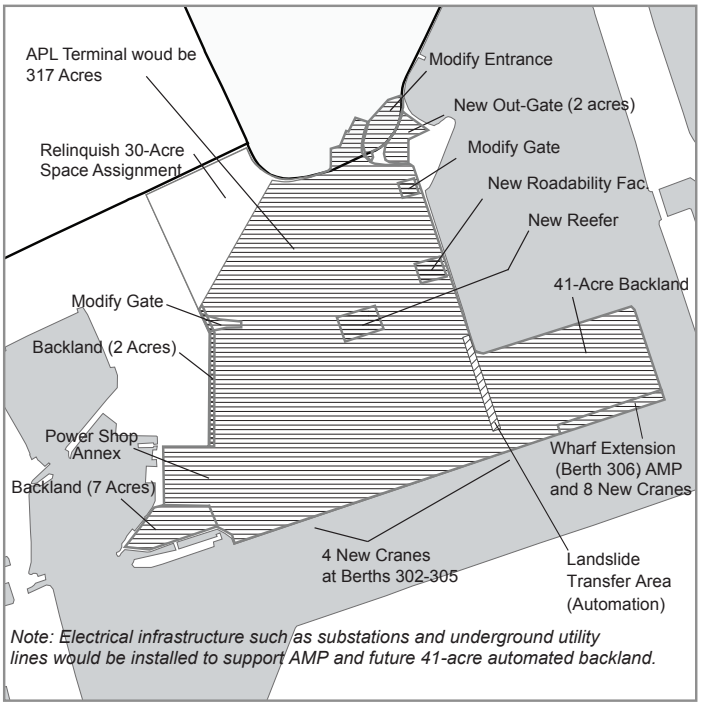
Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Alternatives Evaluated - Alternatives 1-3
Figure 2-9a

CDM

Alternative 4 - Reduced Project: No New Wharf

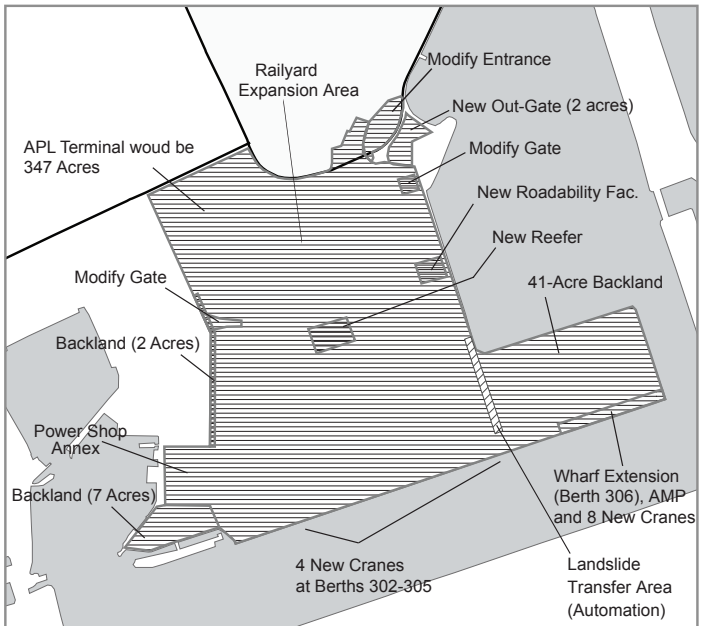


Alternative 5 - Reduced Project: No Space Assignment



Note: Electrical infrastructure such as substations and underground utility lines would be installed to support AMP and future 41-acre automated backland.

Alternative 6 - Proposed Project with Expanded On-Dock Railyard



Note: Approximately 10 acres of backland would be reallocated for the on-dock rail yard expansion. Electrical infrastructure such as substations and underground utility lines would be installed to support AMP and future 41-acre automated backland.

Note: Figures Not to Scale

Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Alternatives Evaluated - Alternatives 4-6
Figure 2-9b

CDM

2.8.1.1 Alternative 1 – No Project

Under Alternative 1, no further Port action or federal action would occur. The Port would not construct and develop additional backlands, wharves, or terminal improvements. No new cranes would be added, no gate or backland improvements would occur, and no infrastructure for AMP at Berth 306 or automation in the backland area adjacent to Berth 306 would be provided. This alternative would not include any dredging, new wharf construction, or new cranes. The No Project Alternative would not include development of any additional backlands because the existing terminal is berth-constrained and additional backlands would not improve its efficiency.

The No Project Alternative would not preclude future improvements to the APL Terminal; however, any change in future use or new improvements with the potential to significantly impact the environment or improvement would need to be analyzed in a separate environmental document.

Under the No Project Alternative, the existing APL Terminal would continue to operate as an approximately 291-acre container terminal. Based on the throughput projections in Appendix C1, the No Project Alternative would handle approximately 2,153,000 (or 2.15 million) TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305 with 572 associated tugboat operations. In addition, this alternative would result in up to 7,273 peak daily truck trips[11] (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

When compared against the CEQA baseline (see Table 2-4), the No Project Alternative would result in fewer environmental impacts than the proposed Project at the final out-year because its operational capacity and level of capital development would be lower. The reduced environmental impacts include fewer aesthetic impacts (no new cranes), less air quality impacts (no construction and less operational emissions), less impact to biological or water resources (no wharf construction or dredging and fewer vessel calls), and lower noise impacts (related to reduced truck trips and reduced construction). However, Alternative 1 would result in one significant unavoidable ground transportation impact at the intersection of Navy Way and Reeves Avenue that would not occur under the proposed Project. Although it would generate less traffic than the proposed Project, Alternative 1 would have a significant and unavoidable impact at the intersection because mitigation cannot be applied as there would be no discretionary action subject to CEQA. The No Project Alternative is not the same as the CEQA baseline. The existing terminal is not operating at its optimal capacity, meaning it could accommodate certain levels of increasing throughput demand, resulting in higher impacts compared to the CEQA baseline period of July 2008 through June 2009.

When compared against the NEPA baseline, the No Project Alternative similarly would result in fewer environmental impacts than those experienced under the proposed Project. In fact, the No Project Alternative would result in fewer impacts than the NEPA baseline. This result occurs because under the NEPA baseline a small amount of construction activity on the existing terminal would occur, as explained in Section 2.6.2. The No Project Alternative is not evaluated under NEPA because NEPA requires an evaluation of the No Federal Action alternative.

[11] Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

Any future legally enacted Port-wide CAAP measure, such as a tariff change or emissions impact fee, would be applied to the No Project alternative, although generally applicable tariff changes that conflict with the terms of an individual operating lease would not apply. Those CAAP measures that would be implemented through a lease modification or mitigation measure also would not apply.

In addition, any legally required measures, such as installation of AMP and associated infrastructure in compliance with CARB requirements, would be implemented separately as a related project.

2.8.1.2 Alternative 2 – No Federal Action

This Alternative includes only the activities and impacts likely to occur absent a USACE permit but could include improvements that require a local action.

For purposes here, this alternative includes only the following Project elements, which would not affect the throughput capacity of the existing terminal:

- The conversion of a portion of the dry container storage unit area to storage for an additional 200 reefer units, and associated electrical infrastructure.
- Installation of utility infrastructure at various areas in the backlands (e.g., relocation of light pole and electrical line extensions to accommodate the converted reefer areas).

The site would continue to operate as an approximately 291-acre container terminal where containers are loaded on and unloaded from vessels, are temporarily stored on backlands, and where containers are transferred to and from trucks and rail cars. Based on the throughput projections in Appendix C1, the No Federal Action Alternative would handle up to approximately 2,153,000 (or 2.15 million) TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305 with 572 associated tugboat operations. In addition, this alternative would result in up to 7,273 peak daily truck trips[12] (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

The No Federal Action Alternative would result in fewer environmental impacts than the proposed Project at the final out-year because its operational capacity and level of capital development would be lower. The reduced environmental impacts relative to the proposed Project would include fewer aesthetic impacts (no new cranes), less air quality impacts (no construction of a new berth and less operational emissions), less impact to biological or water resources (no wharf construction or dredging and fewer vessel calls), less impacts from ground traffic (lower throughput), and lower noise impacts (related to reduced truck trips and reduced construction).

As noted, the NEPA baseline and the No Federal Action Alternative are equivalent in this case, and represent project site conditions without federal action. Therefore, the impacts under the No Federal Action Alternative would be the same as the NEPA baseline scenario in every case, and this Alternative would result in no new impacts under NEPA.

[12] Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

Any future legally enacted Port-wide CAAP measure, such as a tariff change or emissions impact fee, would be applied to this alternative, although generally applicable tariff changes that conflict with the terms of an individual operating lease would not apply. Those CAAP measures that would be implemented through a lease modification or mitigation measure also would not apply.

2.8.1.3 Alternative 3 – Reduced Project: Four New Cranes

Under Alternative 3, four cranes would be added to the existing wharf along Berths 302-305 and the following terminal improvements would be made:

- The conversion of a portion of the dry container storage unit area to storage for an additional 200 reefer units, and associated electrical infrastructure.
- Installation of utility infrastructure at various areas in the backlands (e.g., relocation of light poles and electrical line extensions to accommodate the converted reefer areas).

Under Alternative 3, the total terminal size would remain at approximately 291 acres (it would not provide for the development of the 41 acres created by the Channel Deepening Project), which would be less than the proposed Project. Aside from the above improvements, this alternative would not include the addition or improvement of backland facilities, the construction of a new wharf, or the relocation and improvement of various gates and entrance lanes.

Based on the throughput projections in Appendix C1, TEU throughput under Alternative 3 would be less than the proposed Project, with an expected throughput of approximately 2,583,000 (or 2.58 million) TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305 with 676 associated tugboat operations. In addition, this alternative would result in up to 8,725 peak daily truck trips[13] (2,306,460 annual) including drayage, and up to 2,544 annual one-way rail trip movements.

When compared against the CEQA baseline, Alternative 3 would result in fewer environmental impacts than the proposed Project because this alternative's operational capacity would be lower and its level of capital development would be less. The reduced environmental impacts would include fewer aesthetic impacts (16 cranes compared to 24 for the proposed Project), fewer air quality impacts (less operational emissions), fewer biological or water resource impacts (no wharf construction and fewer vessel calls), fewer ground traffic impacts (fewer truck trips), and fewer noise impacts (related to fewer truck trips and no pile driving).

Relative to the NEPA baseline, Alternative 3 would result in fewer environmental impacts than those projected for the proposed Project. The decreased environmental impacts would result from reduced construction activities; this alternative envisions crane installations only, and reduced operational activity associated with the lower TEU throughput and corresponding ship, truck, and rail emissions.

Alternative 3 assumes implementation of existing and future legally required measures, such as the installation of AMP and associated infrastructure in compliance with CARB

[13] Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

requirements, CAAP measures under the terms of the modified lease that would accompany this alternative, along with any mitigation measure legally imposed under CEQA and NEPA.

2.8.1.4 Alternative 4 – Reduced Project: No New Wharf

Under this alternative, EMS would add six cranes to the existing terminal and develop the 41-acre fill area adjacent to the EMS terminal as container yard backlands. EMS would, however, relinquish the 30 acres of backlands currently under a space assignment agreement. EMS would not add the nine acres of land behind Berth 301 or the two acres at the main gate to its permit. Configuration of all other landside terminal components (i.e., Main Gate improvements) would be identical to the proposed Project. Because no new wharf would be constructed at Berth 306, the 41-acre backland would be operated using traditional methods and would not be expected to transition to use of automated equipment.

Under Alternative 4, the total terminal acreage would be 302 acres, which is less than the proposed Project. Based on the throughput projections in Appendix C1, TEU throughput would be less than the proposed Project, with an expected throughput of approximately 2,783,000 (or 2.78 million) TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305 with 676 associated tugboat operations. In addition, this alternative would result in up to 9,401 peak daily truck trips[14] (2,485,050 annual) including drayage, and up to 2,563 annual one-way rail trip movements.

Relative to the CEQA baseline, Alternative 4 would result in fewer environmental impacts than the proposed Project because its operational capacity and level of capital development would be less. These reduced environmental impacts include fewer aesthetic impacts (18 cranes compared to 24 for the proposed Project), fewer air quality impacts (less operational emissions), fewer biological or water resource impacts (no wharf construction and fewer vessel calls), fewer ground traffic impacts (fewer truck trips), and fewer noise impacts (related to fewer truck trips and no pile driving).

When compared against the NEPA baseline, Alternative 4 would result in fewer environmental impacts than those experienced under the proposed Project. The decreased environmental impacts would occur from fewer construction activities (e.g., no new wharf at Berth 306); reduced operational activity associated with the lower TEU throughput; and direct ship, truck, and rail emissions. These reduced environmental impacts include fewer aesthetic impacts (18 cranes compared to 24 for the proposed Project), fewer air quality impacts (less operational emissions), fewer biological or water resource impacts (no wharf construction), fewer ground traffic impacts (fewer truck trips), and fewer noise impacts (related to fewer truck trips).

Alternative 4 assumes implementation of existing and future legally required measures, such as the installation of AMP and associated infrastructure in compliance with CARB requirements, CAAP measures under the terms of the modified lease that would accompany this alternative, as well as any mitigation measure legally imposed under CEQA and NEPA. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment.

[14] Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

2.8.1.5 Alternative 5 – Reduced Project: No Space Assignment

Alternative 5 would improve the existing terminal, construct a new wharf (1,250 ft) creating Berth 306, add 12 new cranes to Berths 302-306, add 56 acres for backlands, wharfs, and gates improvements, construct electrification infrastructure in the backlands behind Berths 305-306, and relinquish the 30 acres currently on space assignment. The level of capital development (Cargo-handling Equipment) in the retained acreage may need to be increased to offset the loss of the space assignment. This alternative would be the same as the proposed Project, except that EMS would relinquish the 30 acres of backlands under space assignment. As with the proposed Project, the 41-acre backlands and Berth 306 under Alterative 5 could utilize traditional container operations, electric automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel along the new wharf at Berth 306 (approximately 20,000 cy) would occur, with the dredged material beneficially reused, and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2).

Under Alternative 5, the total gross terminal acreage would be 317 acres, which is less than the proposed Project. TEU throughput would be the same as the proposed Project, with an expected throughput of approximately 3,206,000 (or 3.2 million) TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306 with 780 associated tugboat operations. In addition, this alternative would result in up to 11,361 peak daily truck trips[15] (3,003,157 annual) including drayage, and up to 2,953 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Relative to the CEQA baseline, Alternative 5 would result in similar environmental impacts to the proposed Project because its operational capacity would be the same. These environmental impacts include similar aesthetic impacts (24 cranes for Alternative 5 and the proposed Project), similar air quality impacts (the same operational emissions), similar biological and water resource impacts (similar terminal footprint and the same throughput), similar ground traffic impacts (similar operational truck trips), and similar noise impacts (similar truck trips).

When compared against the NEPA baseline, Alternative 5 would result in approximately the same environmental impacts as those experienced under the proposed Project, as the terminal operations would be similar. These environmental impacts include similar aesthetic impacts (24 cranes for Alternative 5 and the proposed Project), similar air quality impacts (the same operational emissions), similar biological and water resource impacts (similar terminal footprint and the same throughput), similar ground traffic impacts (similar operational truck trips), and similar noise impacts (similar truck trips).

Alternative 5 assumes implementation of existing and future legally required measures, such as the installation of AMP and associated infrastructure in compliance with CARB requirements, CAAP measures under the terms of any modification to the lease that would accompany this alternative, as well as any mitigation measure legally imposed under CEQA and NEPA. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment.

[15] Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

2.8.1.6 Alternative 6 – Proposed Project with Expanded On-Dock Railyard

This alternative would be the same as the proposed Project; however, LAHD would redevelop and expand the existing on-dock railyard. The current on-dock railyard can accommodate up to 64 five-platform double-track railcars (equivalent to nearly three full trains) and consists of 8 sets of double tracks. Maximum throughput capacity through the facility is estimated to be approximately 1.04 million TEUs per year. The expansion of the on-dock facility under Alternative 6 would involve the addition of a ninth set of double tracks, which would increase this component's throughput capacity to approximately 1.14 million TEUs per year. Under this alternative, approximately 10 acres of backlands would be removed from container storage for the railyard expansion.

Alternative 6 would improve the existing terminal, develop the existing 41-acre fill area as backlands, add 1,250 ft of new wharf creating Berth 306, and dredge the Pier 300 Channel along Berth 306. Under this alternative, EMS would also add 12 new cranes to the wharves along Berths 302-306, for a total of 24 cranes. As with the proposed Project, the 41-acre backlands adjacent to Berth 306 under Alterative 6 could utilize traditional container operations, electric automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel along Berth 306 would occur (removal of approximately 20,000 cy of material), with the dredged material beneficially reused and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2).

Under Alternative 6, the total gross terminal acreage would be 347 acres. The TEU throughput would be the same as the proposed Project, with an expected throughput of approximately 3,206,000 (or 3.2 million) TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306 with 780 associated tugboat operations. In addition, this alternative would result in up to 10,830 peak daily truck trips[16] (2,862,760 annual) including drayage, and up to 2,953 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Relative to the CEQA baseline, Alternative 6 would result in similar or slightly less environmental impacts to the proposed Project because its operational capacity would be the same. These environmental impacts include similar aesthetic impacts (24 cranes for Alternative 6 and the proposed Project), similar but slightly less air quality impacts (due to increased use of on-dock rail facilities and less truck trips for drayage), equal biological or water resource impacts, and similar but slightly reduced ground traffic impacts (slightly fewer operational truck trips).

When compared against the NEPA baseline, Alternative 6 would result in approximately the same environmental impacts as those experienced under the proposed Project, as the terminal operations would be similar. These environmental impacts include similar aesthetic impacts (24 cranes for Alternative 6 and the proposed Project), similar but slightly less air quality impacts (from fewer truck trips associated with drayage due to

[16] Peak daily truck trips are based on the average day in the peak month. The peak month truck trips are 9.33 percent of the annual trips.

Table 2-4: Summary of Proposed Project and Alternatives at Full Build-out (2027)[a]

	Terminal Acres	Ship Calls	Annual TEUs (in millions)[b]	Cranes	Total Dredging	New Wharves
Proposed Project	347 Gross Terminal Acres	390	3,206,000	12 new A-frame cranes; 24 total	20,000 cy (Berth 306)	1,250 lf of new wharf
Alternative 1: No Project[c]	291 Gross Terminal Acres	286	2,153,000	No new A-frame cranes; 12 total	No dredging	No new wharf
Alternative 2: No Federal Action	291 Gross Terminal Acres Some upland improvements	286	2,153,000	No new A-frame cranes; 12 total	No dredging	No new wharf
Alternative 3: Reduced Project – Four New Cranes	291 Gross Terminal Acres	338	2,583,000	4 new A-frame cranes; 16 total	No dredging	No new wharf
Alternative 4: Reduced Project – No New Wharf	302 Gross Terminal Acres	338	2,783,000	6 new A-frame cranes; 18 total	No dredging	No new wharf
Alternative 5: No Space Assignment	317 Gross Terminal Acres	390	3,206,000	12 new A-frame cranes; 24 total	20,000 cy (Berth 306)	1,250 lf of new wharf
Alternative 6: Project with Expanded On-Dock Railyard	347 Gross Terminal Acres with expanded on-dock railyard	390	3,206,000	12 new A-frame cranes; 24 total	20,000 cy (Berth 306)	1,250 lf of new wharf

[a] This table summarizes the major features of the proposed Project and alternatives.

[b] Throughput projection methodology is based on information in Appendix C1.

[c] The No Project Alternative reflects the existing terminal configuration without physical improvements.

increased on-dock rail usages), the same biological or water resource impacts, and similar but slightly reduced ground traffic impacts (slightly fewer operational truck trips).

Alternative 6 assumes implementation of existing and future legally required measures, such as the installation of AMP and associated infrastructure in compliance with CARB requirements, CAAP measures under the terms of any modification to the lease that would accompany this alternative as well as any mitigation measure legally imposed under CEQA and NEPA. Under this alternative, mitigation measures would be applied to reduce emissions from ships, trucks, rail, yard tractors, and yard equipment.

2.8.2 Alternatives Considered But Not Further Evaluated

A number of alternatives were considered during preparation of this Draft EIS/EIR, but were eliminated from further discussion and detailed, co-equal analysis. These alternatives are described below along with an explanation of the rationale leading to their exclusion from further analysis. Alternatives considered but eliminated from further evaluation include the following:

1) Use of West Coast Ports Outside of Southern California
2) Expansion of Terminals in Southern California Outside of the Los Angeles Harbor District
3) Lightering
4) Liquefied Natural Gas Terminal Facility
5) Off-site Backlands Alternatives
6) Development of New Landfills and Terminals Outside the Berths 302-305 Terminal Area
7) Other Sites in the Los Angeles Harbor District
8) Narrower Wharves
9) Marine Oil Facility
10) Omni Terminal
11) Alternative Container Transport Systems
12) Fully Electrified Container Terminal
13) Expand Rail Lines to handle Cargo Quicker
14) No Expansion but Increased Technology to Increase Efficiency
15) Expanded On-Dock Railyard and Addition of New Cranes Only
16) Maximization of Habitat Restoration

2.8.2.1 Use of West Coast Ports Outside Southern California

Under this alternative, the Port would not expand the existing APL Terminal, but would instead assume that the additional cargo would be accommodated by West Coast ports outside southern California (i.e., Oakland, Seattle, Tacoma, Portland, and Vancouver). It is important to note that the Port has no authority to direct cargo to ports outside its jurisdictional boundaries. The Port could only refuse to provide the discretionary actions necessary to increase Port capacity within its own boundaries, thus providing shippers with an incentive to route cargo to other ports. Such a course is not consistent with the Tidelands Trust or Coastal Act.

To evaluate this alternative, it is important to recognize the current and expected role of the Port in U.S. foreign trade. Between 40 and 45 percent of all the containers handled by U.S. ports come through the Port Complex (USACE and POLA, 2007) and more than 75 percent of all containers shipped through West Coast ports pass through the Ports of Los Angeles, Long Beach, and Oakland because those ports are geographically positioned to best accommodate Asian trade and have the specialized facilities and navigational channels of sufficient depth to safely accommodate the new generation of deep-draft ships, some of which are over 1,200 ft (USACE and LAHD, 2000). The value of goods handled by the Ports of Los Angeles and Long Beach was a combined $240.5 billion in 2004, whereas the value of goods handled by the Ports of Oakland, Seattle, and Tacoma was a combined $63.9 billion in the same year (United States Maritime Administration, 2005). As described in Section 1.2.2 in Chapter 1, Introduction, the extensive transportation connections to the rest of the country make the two San Pedro Bay ports prime destinations for foreign trade.

A survey of West Coast ports prepared for the Deep Draft Navigation Improvements Project showed that other West Coast ports are not capable of absorbing additional cargo diverted from the Port without constructing new facilities (USACE and LAHD, 1992). A number of new studies on goods movement in California, such as the governor's *Goods Movement Action Plan* (CalEPA and the Business, Transportation, and Housing Agency, 2005) have identified capacity constraints at other West Coast ports. Other major West Coast ports have operated at or near current physical capacity, have recently expanded, or are undergoing expansion to accommodate their projected future throughput demand. Although small temporary diversions from the Port can be accommodated elsewhere, large permanent diversions would, in the long-term, require further physical improvements at other major West Coast ports.

Compared to the proposed Project, this alternative would not meet the following Project objectives (see Sections 2.3.3 and 2.3.4):

- Optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- Improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- Increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306;

- Incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306; and
- Improve the access into and out of the terminal, as well as internal terminal circulation, at Berths 302-306 to reduce the time for gate turns and to increase terminal efficiency.

Improvements necessary, for other West Coast ports to meet the objectives of the proposed Project would generate environmental impacts similar to or more pronounced than those associated with the proposed Project (LAHD, 1997a). Moreover, even with the expansion of other Ports, the Port is expected to grow in the long-term. Because use of other Ports would not achieve proposed Project objectives to optimize the cargo handling efficiency and capacity in the Port Complex and improve transportation infrastructure needed to accommodate increased movement of containerized goods through the Port, this alternative is considered infeasible.

2.8.2.2 Expansion of Terminals in Southern California but Outside the Los Angeles Harbor District

In this alternative, new container terminal facilities would be constructed at other southern California ports (i.e. Long Beach, San Diego, Port Hueneme) or a new port would be established to accommodate future increases in cargo volumes that would otherwise be handled by the proposed Project. As with the previous alternative, such an action would satisfy none of the Project objectives, which focus on optimizing, expanding, and improving facilities at Berths 302-305. Moreover, the Port has no authority to direct cargo to ports outside its jurisdictional boundaries. The Port could only refuse to provide the discretionary actions necessary to increase Port capacity within its own boundaries, which is not consistent with the Tidelands Trust or Coastal Act.

The chief candidate among existing ports to accommodate the Port's share of cargo is the Port of Long Beach because that port is similar in size to the Port, has modern container terminals, deep-water access, and is geographically close. However, the Port of Long Beach faces future increases in cargo volumes similar to those forecasted for the Port (see Section 1.2.4). To satisfy that demand, the Port of Long Beach has embarked on its own program of modernization and expansion of container terminals. Furthermore, even if the proposed container terminal could be located in the Port of Long Beach, it would have impacts very similar to those of the proposed Project at the Port, given the proximity of the two ports. Other existing ports in southern California do not have the water depths, wharf facilities, backland capacity, or transportation connections necessary to accommodate a large amount of container cargo (USACE and LAHD, 1992).

The option of building a new port to accommodate additional cargo is infeasible because the California Coastal Act does not allow the development of new commercial ports outside existing port districts. The standards for master plans, contained in Chapter 8 of the Coastal Act, require environmental protection while expressing a preference for port-dependent projects. The logic behind this policy is that it is environmentally and economically preferable to concentrate commercial shipping activities and other maritime industrial facilities in existing ports rather than siting them at new coastline locations.

Using other southern California ports to accommodate future Port cargo volumes is infeasible because sufficient capacity opportunities do not exist. Therefore, this alternative was eliminated from further consideration in this Draft EIS/EIR.

2.8.2.3 Lightering

Lightering involves offloading a portion of cargo from a fully loaded vessel onto smaller vessels until the draft of the larger vessel has been reduced to the point where it can safely transit to the terminals. It is a common practice for liquid-bulk vessels that transport cargo, which can be quickly and safely transferred between vessels through pipes. Lightering is also sometimes used for break-bulk cargos at smaller ports in other countries. Under this alternative, containers would be offloaded from oceangoing container vessels to smaller vessels or barges that would convey them to the existing terminal. This alternative would eliminate the need to deepen berths and channels, because the large vessels would not come to the terminal fully loaded. Instead, the oceangoing vessel would anchor offshore, probably in the Outer Harbor, while the lightering process proceeds.

This alternative would not meet the following Project objectives:

- Improve the container terminal at Berths 302-306 to more efficiently work larger ships;
- Ensure the terminal's ability to accommodate increased numbers and sizes of container ships; and
- Optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations.

Lightering slows cargo movement, requires use of more vessels, and results in higher operational costs. The extra cost of lightering, including use of smaller vessels and delay times, would be considerable. Furthermore, lightering of containers on a large scale has not been shown to be physically practicable or safe, and might not be acceptable to labor and terminal operators for those reasons. Finally, although lightering would avoid the temporary impacts associated with channel deepening (dredging and dredge material reuse and/or disposal), its environmental impacts would be considerable. The inefficiencies associated with lightering would result in increased air pollutant emissions due to:

- Increased calling vessels' in port time;
- Use of additional (smaller) vessels;
- Double-handling of containers;
- Increased risk of cargo loss during transfer; and
- Increased risk to water quality and marine resources.

Therefore, this alternative was eliminated from further consideration in this Draft EIS/EIR.

2.8.2.4 Liquefied Natural Gas Terminal Facility

Under this alternative, the proposed Project site would be redeveloped as a liquefied natural gas (LNG) terminal, instead of improving the site for increased cargo container handling.

Compared to the proposed Project, this alternative would have the effect of eliminating an existing container terminal and; thereby, reducing the overall container handling capacity in the Port Complex, and therefore would not meet the following Project objectives:

- To optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306; and
- To incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306.

The proposed Project site is an existing operating container terminal, and siting an LNG terminal at this location would essentially eliminate a working container terminal or require its relocation elsewhere within the Port.

The *Los Angeles Pilot Service Operations Manual*, issue dated January 15, 2002, sets forth certain navigational restrictions for shipping in the Port under the Manual Policy for Liquefied Hazardous Gas Carriers (LAHD, 2002b). Some of these restrictions impact the feasibility for use of the project site for a LNG terminal. The following restrictions would apply during transit of an LNG carrier:

- One-way traffic of oceangoing vessels is required;
- A safety zone extending 3,000 ft ahead of the carrier and 1,500 ft on all other sides of the carrier is established when the carrier is in transit—no other vessel traffic may pass through this safety zone; and
- When the LNG carrier is berthed, a safety zone extending 1,500 ft around the carrier is established by the Coast Guard—no other vessel traffic may pass through this safety zone.

Based on these safety requirements, an LNG terminal at the proposed Project site could disrupt container terminal operations at the APM terminal on Pier 400.

Segments of the active Palos Verdes fault cross the Los Angeles Harbor near the proposed Project site. The location of the fault near the site is not well defined, but current data suggest the fault most likely passes close to Berths 302-306 (see Figure 3.5-2 in Section 3.5, Geology).

In addition, the APL Terminal lease extends until 2027. Because of the current lease obligation and in consideration of proximity of the Palos Verdes fault use of the Berths 302-306 site for a LNG Terminal Facility was eliminated from further analysis.

2.8.2.5 Off-site Backlands Alternatives

Off-site backland alternatives would involve use of existing backland areas elsewhere on Terminal Island or on the mainland within the Port Complex to store and handle containers. Under this alternative, the terminal wharves would be expanded but the terminal's backlands would not be developed and expanded as proposed. Instead, container storage and handling facilities would be constructed elsewhere in the Port as isolated yards with fencing, lighting, gates, and container handling equipment. Import containers would be off-loaded from the ship onto chassis at the APL Terminal by cranes and drayed by on-road trucks from the terminal to the off-site locations, where they would be lifted off the chassis into a grounded stack by terminal equipment or stored on the chassis pending pick-up. Export containers would be handled in a reverse manner.

This alternative would provide more backlands for container handling but would result in greater air quality and traffic impacts because containers would have to be handled more often with this alternative than with the proposed Project (once in the marine terminal and once in the backlands facility). The containers would have to be conveyed by on-road trucks between the terminal and the backlands facility, which would contribute to congestion on local streets and produce increased air emissions compared to the proposed Project.

In addition, container terminal operators are consolidating facilities wherever possible to expand and optimize their cargo handling efficiencies and capacities. Consolidation results in reduced traffic within the Port and reduced air emissions per TEU. Off-site backland alternatives would not offer those benefits, especially with the existing 41 acres of fill behind Berths 305 and 306. Furthermore, land is in short supply in the Port, so that it is not certain that suitable locations for off-site backlands could be acquired and developed in a timely manner.

Finally, because current operations are berth-constrained, providing for more acreage of backland would not increase throughput or make operations more efficient.

Compared to the proposed Project, this alternative would not meet the Project objectives:

- To optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306; and
- To incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306.

While off-site backlands might be needed in the future, they do not meet the current objectives of the proposed Project to accommodate projected growth in the volume of containerized cargo through the Port in accordance with its legal mandates (see Section 1.2.1 of Chapter 1), and this alternative is judged to result in increased environmental impacts compared to the proposed Project. Therefore, this alternative was eliminated from further consideration in this Draft EIS/EIR.

2.8.2.6 Development of New Landfills and Terminals Elsewhere in the Port

This alternative would consist of creating land elsewhere in the harbor and building a new terminal on that land. The new terminal would be required to handle approximately 1.1 million TEUs per year in 2027 (the incremental throughput difference between the proposed Project and the No Project Alternative or No Federal Action Alternative) to satisfy the objectives of the proposed Project, which means that the new terminal would need to be approximately 105 acres in size, have one or two berths, and have an on-dock railyard to be as efficient as the proposed Project. The new land would have to be in the Outer Harbor, because there is no body of water that is not needed for vessel navigation elsewhere in the Harbor, and it is not feasible at this point to operate a container terminal built outside the breakwaters. Furthermore, LAHD projections of future Port capacity (Section 2.3.1.1) already incorporate the need for additional landfills in the Outer Harbor, so that implementing this alternative would displace a need for new land that has previously been identified.

The costs and impacts of developing new facilities on new land, as well as the time it would take, would be much greater than for the proposed Project, which largely focuses on optimizing existing facilities and expanding onto existing land. The creation of a 105-acre landfill would necessitate much more dredging and associated biological and water resource impacts than in the case of the proposed Project. The loss of 105 acres of marine habitat due to filling open water, although it might be mitigated, nevertheless represents an avoidable impact on biological resources and the aquatic ecosystem.

Constructing additional landfill in the Outer Harbor to expand container terminals and backland capacities would not meet Port objectives:

- To optimize the use of existing land at the APL Terminal and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306;
- To incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306; and to improve the access into and out of the terminal, as well as internal terminal circulation, at Berths 302-306 to reduce the time for gate turns and
- To increase terminal efficiency.

This alternative was considered but eliminated during previous environmental impact analyses (USACE and LAHD, 1992), and was eliminated from further consideration in this Draft EIS/EIR.

2.8.2.7 Other Sites in the Los Angeles Harbor District

Under this alternative, the Port would expand and reconfigure a different container terminal in such a way as to accommodate an additional 1.1 million TEUs by 2027 (the incremental throughput difference between the proposed Project and the No Project Alternative or No Federal Action Alternative). It is likely that berth dredging and wharf upgrades and extensions would be needed to accommodate the additional vessel traffic, but the need for additional landfill would be site-dependent. Increased backland acreage would also be required.

This alternative would not achieve any of the Project objectives, which focus on optimizing, expanding, and improving facilities at Berths 302-305 and Port waterways. Moreover, other container terminals (Berths 97-109, 121-131 and 136-147) already have approved terminals or expansions, or are expected to be expanded and modernized with associated NEPA/CEQA review in the near future. There are no other large tracts of land in the Port with water access and with a minimum of -53-foot MLLW channel depth available at this time that have the potential to support container terminal operations. Furthermore, as described in Section 1.2.4, there is a need to upgrade all of the container terminals in the Port. Accordingly, this alternative was eliminated from further consideration in this Draft EIS/EIR.

2.8.2.8 Narrower Wharves

Narrower wharves or shorter wharves would reduce impacts to the waters of the U.S., but the proposed new wharf construction would be just wide enough to accommodate the standard 100-foot-gauge gantry crane. A narrower wharf would not allow the installation of new cranes along this section of wharf, meaning the new berth would not be functional. Moreover, because current operations are berth-constrained, providing for restricted additional capacity in this respect would restrict maximized usage of other terminal facilities, such as use of backland and on-dock rail operations.

Compared to the proposed Project, this alternative would not meet any of the Project objectives. Therefore, reducing the width of the wharves has been eliminated from further consideration.

2.8.2.9 Marine Oil Facility

This alternative would improve the existing 41-acre undeveloped area as a marine oil terminal or facility, with no improvements to the existing container terminal at Berths 302-305. This alternative would result in the siting of a marine oil facility adjacent to the Pier 300 Shallow Water habitat, where eelgrass is present. In addition, such an alternative would require modification of the existing APL Terminal to allow for the creation of a road to access the site and the provision of required infrastructure and pipelines. Furthermore, the existing undeveloped fill is designated for general cargo and other uses (railyards and infrastructure supporting general cargo uses) in the Port Master Plan, and a marine oil facility is inconsistent with this designation.

Compared to the proposed Project, this alternative would not meet the following Project objectives:

- To optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306; and
- To incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306.

Segments of the active Palos Verdes fault cross the Los Angeles Harbor near the proposed Project site. The location of the fault near the site is not well defined, but current data suggest the fault most likely passes close to Berths 302-306 (see Figure 3.5-2 in Section 3.5, Geology).

Due to the noted site constraints, the proximity of the Palos Verdes fault to the site, and the inability of this alternative to meet the Project Objectives, a marine oil facility at the 41-acre undeveloped land adjacent to the APL Terminal was eliminated from further consideration.

2.8.2.10 Omni Cargo Terminal

The Omni Cargo Terminal Alternative would convert the existing container terminal into an operating omni cargo terminal that would handle "Roll-On-Roll-Off" and break-bulk commodities. "Roll-On-Roll-Off" goods include automobiles. Break-bulk commodities include factory equipment, forest products, bundles of steel, and other bulky material.

This alternative would require the decommissioning and relocation of the existing container terminal, making adaptation improvements to the decommissioned terminal to accommodate omni terminal operations (including a 1,250-foot wharf extension), and improving the 41-acre undeveloped fill area with terminal facilities that support omni terminal operations, including large warehousing facilities.

The Berths 302-305 lease extends until 2027, which would prevent use of the existing terminal as an omni terminal before that date. in addition, there is a long-term need to increase the container handling capacity in the Port Complex, and this alternative would reduce existing and future container handling capacity. This alternative would not meet the following Project objective as well as the proposed Project because the demand for containerized throughput is expected to grow over the long term: optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations.

In addition, this alternative would not be consistent with the following Project objectives:

- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- To increase accommodations for container ship berthing, provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306; and
- To incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306; and improve the access into and out of the terminal, as well as internal terminal circulation, at Berths 302-306 to reduce the time for gate turns and to increase terminal efficiency.

In addition, this alternative would likely necessitate siting of a new container terminal elsewhere in the Port Complex to accommodate throughput demand in the long term. For these reasons, an omni terminal at the existing project site has not been carried forward for further consideration.

2.8.2.11 Alternative Container Transport Systems

Several comments on the NOI/NOP suggested an alternative container transport system to the system anticipated to be used under the proposed Project, including a magnetic levitation or electrified systems. An Alternative Container Transport System would utilize one or more clean technologies (not based on diesel internal combustion engines) to move containers in and out of the San Pedro Bay ports with the goal of reducing emissions.

An Alternative Container Transport System would require extensive integration and capital investment on the part of rail companies; as such a system would have to be integrated into the existing rail system that is based on diesel locomotives. Development of such an alternative therefore must occur on a regional basis, and would require extensive coordination by many stakeholders (including railroad companies), and likely would require external funding commitments.

An Alternative Container Transport System, while important to consider at a system-wide level, does not represent an alternative that can be implemented in lieu of the proposed Project or one of its feasible alternatives. Rather, once such a system's feasibility is examined and proven, logistical issues resolved, and the system is constructed and implemented, the Alternative Container Transport System would represent a system that could support the proposed Project or selected alternative within the context of the entire Port setting. Based on this, an Alternative Container Transport System is not considered a viable or reasonably feasible alternative to the proposed Project.

2.8.2.12 Fully Electrified Container Terminal

Several comments on the NOI/NOP suggested that a fully electrified container terminal be considered as an alternative to the proposed Project. The Ports of Los Angeles and Long Beach have developed a roadmap for moving forward with the identification, evaluation, and integration of zero emission technologies for goods movement (POLB, 2011). This roadmap discusses the zero emissions technologies under evaluation, including on-road drayage, cargo-handling equipment, and rail operations. While electrification could, theoretically, allow for marginal increases in throughput

capacity, as the RMGs it would support can more quickly handle TEUs and stack them to greater densities, the APL Terminal currently is berth constrained and would continue to be berth constrained after construction of the proposed Berth 306. Thus, because this choke point exists independent of backland operations, full electrification of the Pier 300 backlands would not result in capacity increases.

There are several pilot projects within the Port to test the feasibility and durability of electric drayage trucks and cargo-handling equipment. In 2007, the Port of Los Angeles and the South Coast Air Quality Management District (SCAQMD) initiated a demonstration of a lead-acid battery electric truck. Phase 2 of the demonstration included testing of upgraded trucks. Phase 3 will soon commence and will include further upgraded trucks that utilize an lithium ion battery in conjunction with a hydrogen fuel cell. The performance of these trucks (and some cargo-handling equipment) will be tested in various terminal and short-haul drayage operations to evaluate hauling capacity, range, speed, and reliability over varying duty cycles. The reliability and durability of heavy duty electric trucks have yet to be proven.

Although several test projects are underway that are intended to demonstrate the feasibility and reliability of the zero-emission trucks and cargo-handling equipment, full electrification of the APL Terminal is not considered to be technologically feasible at this time, and therefore is not currently considered to be a viable or feasible alternative to the proposed Project.

2.8.2.13 Accelerate Expansion of Rail Lines to Handle Cargo

One comment on the NOI/NOP recommended the expansion or improvement of the rail lines to move cargo more quickly. Although the rail lines in the immediate proposed Project area would require upgrades in the future (post-2027), the rail line capacity is not currently a bottleneck that limits rail transport of containers through the on-dock yard at the existing terminal. It should be noted that the Alameda Corridor Transportation Authority was evaluating options of increasing the capacity of the Badger Avenue lift bridge, but has since shifted the focus to seismically retrofitting the bridge rather than expanding it.

That aside, current and future operations are berth-constrained, such that providing for more Port-wide rail capacity would not increase throughput or make operations more efficient. This alternative therefore would not meet the following Project objectives:

- To optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships; and
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306.

Thus, the expansion or improvements to area rail lines is not considered to be a viable or feasible alternative to the proposed Project.

2.8.2.14 No Expansion but Increased Technology to Increase Efficiency

Several comments on the NOI/NOP suggested that an alternative that improves efficiencies on the existing terminal footprint be considered. Such an alternative could include upgraded gates, electric cranes, improved rail lines, denser backland operations, and other improvements.

The specific suggestions either 1) do not take account of current operations (e.g., wharf cranes already are electrically powered), or 2) propose improvements that are included in other alternatives.

For example, section 2.8.2.13 above discusses the option of improving rail lines. Meanwhile, Alternative 3, which suggests the addition of four new cranes to the existing terminal, would improve the efficiency of the existing terminal. Alternative 4 also would use enhanced technology to increase efficiency; though it would slightly increase the terminal size to 302 acres from the existing 291 acres, it would add cranes to improve the berth capacity.

It also should be noted that the existing terminal is berth constrained, not constrained by backland efficiency. Thus, improvements to the existing backlands area, standing alone, would not increase the throughput capacity of the existing terminal.

Based on the above, this alternative would not substantively expand on the range of alternatives currently being evaluated in this EIS/EIR, and is therefore not carried forward for further consideration.

2.8.2.15 Expanded On-Dock Railyard and Addition of New Cranes Only

One comment on the NOI/NOP recommended the consideration of an alternative that expands the on-dock railyard at the existing terminal and adds new cranes to the existing wharf, without further expansion of the terminal's size. The addition of new cranes to the existing terminal without increasing the terminal size is included in Alternative 3, which is being evaluated in this EIS/EIR.

Regarding expanded on-dock rail, this component is included in Alternative 6, which is being evaluated in this EIS/EIR. The current on-dock railyard has sufficient capacity to accommodate the throughout associated with the existing terminal, even if new cranes were added to the existing terminal. Accordingly, including expansion of on-dock rail in Alternative 3 would not reduce the operational impacts expected to result from Alternative 3.

Based on the above, this alternative would not substantively expand on the range of alternatives currently being evaluated in this EIS/EIR, and is therefore not carried forward for further consideration.

2.8.2.16 Maximization of Habitat Restoration

One comment on the NOI/NOP recommended that habitat restoration at the proposed Project site be maximized to protect and preserve the shallow water habitat

(presumably the Pier 300 shallow water habitat to the east of the existing terminal). An alternative that maximizes habitat restoration at the project site could take two forms, eliminating the existing terminal and subsequently converting the terminal site to suitable habitat for Port area wildlife or converting the undeveloped 41-acre fill area to suitable habitat for Port area wildlife. Converting the entire terminal to suitable wildlife habitat is not considered a feasible alternative because the terminal is operating under an existing lease that is in effect through 2027. Moreover, it would not satisfy the Project objectives.

Leaving the 41-acre eastern expansion of Pier 300 undeveloped or converting it to suitable wildlife habitat would preclude the installation of a new wharf and dredging Berth 306 to accommodate larger vessels. As explained in Section 2.8.1.3 (Alternative 3), without the development of the 41-acre area as backlands or a new wharf along the 41-acre area (Berth 306), throughput could only be increased up to approximately 2.58 million TEUs. Thus, this alternative would not substantively expand the range of alternatives considered in this EIS/EIR, and would not fully address the following Project objectives:

- To optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations;
- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and ensure the terminal's ability to accommodate increased numbers and sizes of container ships;
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations, at Berths 302-306; and
- To incorporate modern backland design efficiencies into improvements to the existing vacant landfill area at Berths 305-306.

Furthermore, because the 41-acre area was created for the purpose of supporting general cargo, its use as a wildlife habitat area would likely necessitate further fill creation elsewhere in the Port, with associated environmental impacts. In addition, the Regulations and Guidelines for Development Projects in the Port Master Plan established that the highest priority for any water or land area use within the jurisdiction of the Port shall be for developments that are completely dependent on harbor waters for their operations. With the 41-acre fill area designated for general cargo and other uses in the Port Master Plan and the need to use the 41 acres for water-dependent uses, the option of using the 41 acres for habitat restoration was not advanced into further evaluation.

Dredging will be necessary to accommodate larger ships that shipping lines are expected to use in future years to make the movement of containerized cargo more efficient. Failure to dredge; therefore, would preclude the following Project objectives:

- To improve the container terminal at Berths 302-306 to more efficiently work larger ships and to ensure the terminal's ability to accommodate increased numbers and sizes of container ships;

- To optimize the use of existing land at Berths 302-306 and associated waterways in a manner that is consistent with the LAHD's public trust obligations; and
- To increase accommodations for container ship berthing, and provide sufficient backland area and associated improvements for optimized container terminal operations at Berths 302-306.

Although a commenter recommended this alternative in light of the value and size of the shallow water habitat, the potential for impacts to the Shallow Water habitat have been evaluated in this EIS/EIR, which considers mitigation measures where necessary. For the above reasons, this alternative has been eliminated from further consideration.

2.9 Relationship to Existing Statutes, Plans, Policies, and Other Regulatory Requirements

One of the primary objectives of the USACE and LAHD approval processes is to ensure that the proposed Project or alternative is consistent with applicable statutes, plans, policies, and other regulatory requirements. Table 2-5 lists the statutes, plans, policies, and other regulatory requirements applicable to the proposed Project and alternatives. Additional analysis of plan consistency is contained in individual resource sections of Chapter 3, Environmental Analysis, and, in particular, in Section 3.9 (Land Use).

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
California Coastal Act of 1976	The Coastal Act (PRC Div. 20 Section 30000 *et seq.*) identifies the Port and its facilities as a "primary economic and coastal resource of the state, and an essential element of the national maritime industry (PRC Section 30701). The Port is responsible for modernizing and constructing necessary facilities to accommodate deep-draft vessels along with the demands of foreign and domestic waterborne commerce as well as other traditional and water-dependent and related facilities to preclude the necessity for developing new ports elsewhere in the state (Sections 30007.5 and 30701 [b]). The Act also establishes that the highest priority for any water or land area use within the jurisdiction of the Port shall be for developments that are completely dependent on such harbor water areas and/or harbor land areas for their operations (Sections 30001.5 [d], 30255 and 31260). The Coastal Act further provides that the Port should "Give highest priority to the use of existing land space within harbors for port purposes, including, but not limited to, navigational facilities, shipping industries, and necessary support and access facilities." (Section 30708 [c]). Under the California Coastal Act, water areas may be diked, filled, or dredged when consistent with a certified port master plan only for specific purposes, including: (1) construction, deepening, widening, lengthening, or maintenance of ship channel approaches, ship channels, turning basins, berthing areas, and facilities that are required for safety and the accommodation of commerce and vessels to be served by port facilities; and (2) new or expanded facilities or waterfront land for Port-related facilities. In accordance with provisions of the Coastal Act, the Port has a certified Port Master Plan (PMP) that provides the Port with Coastal Development Permit authority for actions/developments consistent with that PMP. Items that are inconsistent with the Master Plan such as new fills in water would require a Master Plan Amendment through the Coastal Commission. The proposed Project and alternatives are consistent with the PMP as amended.
Coastal Zone Management Act (CZMA)	Section 307 of the Coastal Zone Management Act (CZMA) requires that all federal agencies with activities directly affecting the coastal zone, or with development projects within that zone, comply with the state coastal acts (in this case, the California Coastal Act of 1976) to ensure that those activities or projects are consistent, to the maximum extent practicable. The California Coastal Commission will use this Draft EIS/EIR when considering whether to find the proposed Project or an alternative consistent with the Coastal Act, and the USACE will use that approval as a demonstration that the proposed Project or alternative complies with the CZMA.
Port Master Plan	The PMP (POLA, 1979) provides for the development, expansion, and alteration of the Port (both short-term and long-term) for commerce, navigation, fisheries, Port-dependent activities, and general public recreation. Those objectives are consistent with the provisions of the California Coastal Act (1976), the Charter of the City of Los Angeles, and applicable federal, state, and municipal laws and regulations. The proposed Project and alternatives are consistent with the PMP as amended.
California Coastal Plan	Under provisions of the California Coastal Act, the PMP is incorporated into the Local Coastal Program of the City of Los Angeles. The LAHD has coastal development permit authority for activities in the Main Channel. Therefore, if the proposed Project and the alternatives would be consistent with the PMP, the proposed Project would also be considered consistent with the Local Coastal Program.

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
California Tidelands Trust Act, 1911	Submerged lands and tidelands within the Port, which are under the Common Law Public Trust, were legislatively granted to the City of Los Angeles pursuant to Chapter 656, Statutes of 1911 as amended. Those properties are held in trust by the City and administered by the LAHD to promote and develop commerce, navigation and fisheries, and other uses of statewide interest and benefit, including but not limited to, commercial, industrial, and transportation uses, public buildings and public recreational facilities, wildlife habitat, and open space. The LAHD would fund construction of the proposed Project or an alternative with trust revenues.
San Pedro Bay Clean Air Action Plan (CAAP)	The Port, in conjunction with the Port of Long Beach and with guidance from AQMD, CARB, and USEPA, has developed the San Pedro Bay Clean Air Action Plan (CAAP), which was approved by the Los Angeles and Long Beach Boards of Harbor Commissioners on November 20, 2006. The CAAP focuses on reducing diesel particulate matter (DPM), NO_X, and SO_X, with two main goals: (1) to reduce Port-related air emissions in the interest of public health, and (2) to disconnect cargo growth from emissions increases. The Plan includes near-term measures implemented largely through the CEQA/NEPA process for new leases at both ports. The proposed Project and alternatives include air quality control measures outlined in the CAAP, both as mitigation that will be imposed via permits and lease provisions and as standard measures that will be implemented through the lease, agreements with other agencies and business entities, and Port contracting policies. Details on mitigation and lease measures associated with air quality can be found in Section 3.2, Air Quality, Meteorology, and Greenhouse Gases.
Port Real Estate Leasing Policy	The purpose of this Policy is to provide a framework that governs leasing and rental decisions as they relate to tenant retention, selecting new tenants, development of new agreements and, as appropriate, modifications to existing agreements by amendments. The proposed Project or an alternative would be consistent with the Leasing Policy in that it would incorporate environmental remediation, pollution prevention, and CAAP provisions that would be implemented through the lease.
Port Strategic Plan	The Port Strategic Plan (USACE and POLA, 2007) identifies the mission of the Port and provides 11 strategic objectives for the next 5 years. The mission includes promotion of a "grow green" philosophy combined with fiduciary responsibility and promotion of global trade. The 11 strategic objectives include, minimization of land use conflicts, maximizing the efficiency and the capacity of current and future facilities, addressing needed infrastructure requirements, maintaining financial self-sufficiency, raising environment standards and enhancing public health, promoting emerging and environmentally friendly cargo movement technology and energy sources, providing for safe and efficient operations and homeland security, strengthening local community relations and developing more and higher quality jobs. The proposed Project (and Alternatives 5 and 6) are consistent with the Strategic Plan because it would help to maximize the efficiency and capacity of container terminal operations, improve environmental standards, and provide for safe and efficient operations.
Port Risk Management Plan	The Risk Management Plan, an amendment to the Port Master Plan, was adopted in 1983, per requirements of the California Coastal Commission. The purpose of the Risk Management Plan is to provide siting criteria relative to vulnerable resources and the handling and storage of potentially hazardous cargo such as crude oil, petroleum products, and chemicals. The Risk Management Plan provides guidance for future development of the Port to minimize or eliminate the hazards to vulnerable resources from accidental releases (LAHD, 1983). The proposed Project and the alternatives are designed consistent with the Risk Management Plan.

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
Ports of Los Angeles and Long Beach, Water Resources Action Plan	The Water Resources Action Plan (WRAP) is a plan being implemented by the Ports of Los Angeles and Long Beach to protect and improve water and sediment quality in the San Pedro Bay. The WRAP will establish programs and water quality improvement measures necessary to achieve the goals and targets that will be established by the Regional Water Quality Control Board in upcoming regulations. The plan will also target four basic types of potential sources of pollutants to harbor waters: Land Use Discharges, On-Water Discharges, Sediments, and Watershed Discharges. The proposed Project (and Alternatives 5 and 6) would include dredging and, if the material were contaminated, would help improve sediment quality in the bay by removing and properly treating or disposing of such material.
City of Los Angeles General Plan – Port of Los Angeles Plan	The Port of Los Angeles Community Plan is part of the General Plan for the City of Los Angeles (City of Los Angeles, 1982a). This plan provides a 20-year official guide to the continued development and operation of the Port. It is designed to be consistent with the Port of Los Angeles Master Plan discussed above. Because the proposed Project or an alternative would be consistent with the PMP it would also be consistent with the goals of the General Plan.
City of Los Angeles – San Pedro Community Plan	The San Pedro Community Plan (City of Los Angeles, 1982b) serves as a basis for future development of the community. It is also the land use plan portion of the City's Local Coastal Program for San Pedro. The Port, although contiguous to San Pedro, is not part of the San Pedro Community Plan Area. However, the San Pedro Community Plan does make recommendations regarding the Port, particularly for areas adjacent to commercial and residential areas of San Pedro. Although the proposed Project site is not contiguous with San Pedro the proposed Project or an alternative would be consistent with these recommendations as the Port has taken into consideration the nearby residential and commercial communities of San Pedro during project development through the scoping process.
City of Los Angeles General Plan – Air Quality Element	The City of Los Angeles General Plan has an Air Quality Element (City of Los Angeles, 1992) that contains general goals, objectives, and policies related to improving air quality in the region. Policy 5.1.1 relates directly to the Port and requires improvements in harbor operations and facilities to reduce emissions. The LAHD is actively planning for and implementing such improvements. The proposed Project and alternatives are consistent with the Air Quality Element in that it incorporates CAAP measures to reduce air quality impacts.
Water Quality Control Plan – Los Angeles River Basin	The Water Quality Control Plan for the Los Angeles River Basin (Region 4) (Basin Plan) was adopted by the Regional Water Quality Control Board, Los Angeles Region (RWQCB) in 1978 and updated in 1994 (RWQCB, 1994). The Basin Plan designates beneficial uses of the basin's water resources. The Basin Plan describes water quality objectives, implementation plans, and surveillance programs to protect or restore designated beneficial uses. The proposed Project or an alternative would be operated in conformance with objectives of the Water Quality Control Plan because it would be required by the lease to comply with the General Industrial permit for storm water and the specific requirements of the NPDES Permit and WDR from the Los Angeles RWQCB.

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
Water Quality Control Policy – Enclosed Bays and Estuaries of California	In 1974, the State Water Resources Control Board (SWRCB) adopted a water quality control policy that provides principles and guidelines to prevent degradation and to protect the beneficial uses of waters of enclosed bays and estuaries (SWRCB, 1974). Los Angeles Harbor is considered to be an enclosed bay under this policy. Activities, such as the discharge of effluent, thermal wastes, radiological waste, dredge materials, and other materials that adversely affect beneficial uses of the bay and estuarine waters are addressed. Waste discharge requirements developed by the RWQCB, among other requirements, must be consistent with this policy. The proposed Project or an alternative would be constructed and operated in conformance with objectives of the Water Quality Control Policy through controls on construction activities (dredging and fill, wharf construction) and on operations (stormwater and other discharges).
Air Quality Management Plan	The federal Clean Air Act (CAA) and its subsequent amendments establish the National Ambient Air Quality Standards (NAAQS) and delegate the enforcement of these standards to the states. In areas that exceed the NAAQS, the CAA requires states to prepare a State Implementation Plan (SIP) that details how the NAAQS will be achieved within mandated time frames. The CAA identifies emission reduction goals and compliance dates based on the severity of the ambient air quality standard violation within an area. The California Clean Air Act (CCAA) outlines a program to attain the California Ambient Air Quality Standards (CAAQS) for O_3, NO_2, SO_2, and CO by the earliest practical date. The Lewis Air Quality Act of 1976 established the South Coast Air Quality Management District (SCAQMD), created SCAQMD jurisdiction over the four-county South Coast Air Basin, and mandated a planning process requiring preparation of an Air Quality Management Plan (AQMP). The 2007 AQMP (CARB, 2007) proposes emission reduction strategies that will enable the South Coast Air Basin to achieve most notably ozone and particulate matter air quality standards within the mandated time frames. The proposed Project or an alternative would be required to comply with rules and regulations used to regulate sources of air pollution in the South Coast Air Basin, which include control measures found in the AQMP. Further, the proposed Project or an alternative would be consistent with this plan because construction and operation of the proposed Project are consistent with SCAG regional employment and population growth forecasts, which were used in the development of the 2007 AQMP.
California Air Resources Board – Emission Reduction Plan for Ports and Goods Movement	California Air Resources Board (CARB) approved the Emission Reduction Plan for Ports and Goods Movement (CARB, 2006) on April 20, 2006. All of the proposed mitigations in this EIR were developed as part of the Port's Clean Air Action Plan (POLA and POLB, 2006; see Section 1.6). Thus, the Port Air Quality Plan complies with CARB goals and meets and/or exceeds all reduction strategies. All of the proposed mitigations in this EIS/EIR were developed to be consistent with the CAAP (POLA and POLB, 2006 and amended 2010), which in turn was developed to be consistent with CARB goals and reduction strategies.

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
AB 32	On September 27, 2006, Governor Schwarzenegger signed AB 32, the Global Warming Solutions Act. The Act caps California's greenhouse gas emissions at 1990 levels by 2020. This legislation represents the first enforceable statewide program in the United States to cap all GHG emissions from major industries that includes penalties for noncompliance. It requires the State Air Resources Board to establish a program for statewide greenhouse gas emissions reporting and to monitor and enforce compliance with this program. The proposed Project (and Alternatives 4, 5 and 6) would improve the operational efficiency of the site, including the replacement of existing buildings with more efficient ones that would comply with the City's current green building code. Additionally, the proposed Project or an alternative would be required to comply with Port requirement such as the CAAP to reduce air emissions. The proposed Project or an alternative would thereby implement energy and emission reduction requirements in compliance with greenhouse gas emission reduction strategies and would thus be in compliance with AB 32.
Southern California Association of Governments Regional Plans	Southern California Association of Governments (SCAG) is responsible for developing regional plans for transportation management, growth, and land use, as well as developing the growth factors used in forecasting air emissions within the South Coast Air Basin. SCAG has developed a Growth Management Plan (GMP), a Regional Housing Needs Assessment, a Regional Mobility Plan (RMP), and in cooperation with the SCAQMD, the AQMPs. The proposed Project or an alternative would not generate a measurable change in population distribution, nor would it result in a change to housing demand on a regional or local scale. It would fit within population and housing projections for the local area and region as a whole and thus would be consistent with these plans.
Congestion Management Plan	The Congestion Management Program (CMP) is a state-mandated program intended as the analytical basis for transportation decisions made through the State Transportation Improvement Program process (LACMTA, 2010). The CMP was developed to: (1) link land use, transportation, and air quality decisions; (2) develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel; and (3) propose transportation projects that are eligible to compete for state gas tax funds. The CMP includes a Land Use Analysis Program, which requires local jurisdictions to analyze the impacts of land use decisions on the regional transportation system. For development projects, an EIR is required based on local determination and must incorporate a Transportation Impact Analysis into the EIR. This Draft EIS/EIR includes a transportation impact analysis (Section 3.6, Ground Transportation) and thus is consistent with the CMP.
Water Quality Regulations	The River and Harbor Act of 1899, Section 10; federal Water Pollution Control Act (as amended by the Clean Water Act of 1977), Section 401 and 402; Marine Protection, Research, and Sanctuaries Act of 1972, Section 103; California Hazardous Waste Control Act; State Water Resources Control Board, Enclosed Bays and Estuaries Plan; Water Quality Control Plan for the Los Angeles River Basin (Region 4B), adopted by the Regional Water Quality Control Board, Los Angeles Region. This Draft EIS/EIR addresses the federal water quality regulations associated with the proposed Project or an alternative; therefore, the proposed Project or an alternative would be consistent with water quality laws, regulations, and plans.
Air Quality Regulations	Clean Air Act, Title 40 CFR Parts 50 and 51 as amended; Prevention of Significant Deterioration, Titles 40 CFR Part 51.24 and 40 CFR Part 52.21; California Clean Air Act; Air Quality Management Plan of the City of Los Angeles General Plan, Air Quality Element; and SCAQMD Regulations X111 and XV, New Source Review and Rules 212, 401, 403, and 431.2. Refer to Section 3.2, Air Quality, Meteorology and Greenhouse Gas, for discussion of applicable air quality laws, regulations and plans.

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
Transportation Regulations	California Public Utilities Commission Guidelines; Federal Railroad Administration Guidelines; Federal Highway Administration Guidelines; California Transportation Guidelines; California Administrative Code Section 65302 (f)-Noise Element; Federal Aid Highway Program Manual 7-7-3; USACE Regulation 1105-2-100; National Environmental Compliance, 91-190; United States Coast Guard Regulations Pertaining to Navigation Safety and Waterfront Facilities; State and Federal Department of Transportation Requirements regarding Track and Rail Transportation of Hazardous Materials; NEPA of 1969 as Amended (Public Law 91-190); and USACE Regulation 1105-2-100, Economic and Environmental Principles and Guidelines for Water and Related Land Resource Implementation Studies. The proposed Project or an alternative would comply with all applicable transportation laws, regulations and guidelines.
Biological Resources Protection	Endangered Species Act of 1973, as amended; Marine Mammal Protection Act; Migratory Bird Conservation Act; Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972; California Endangered Species Act; Section 302 of the Marine Protection, Research, and Sanctuaries Act of 1972; United States Fish and Wildlife Act of 1956 (16 USC 742a *et seq*.); Fish and Wildlife Coordination Act (16 USE 661 *et seq*.); Magnuson-Stevens Fishery Conservation and Management Act, as amended through 1996; Executive Order 13112, Invasive Species; Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (P.L 01-646), as amended by the National Invasive Species Act of 1996; Ballast Water Management for Control of Nonindigenous Species Act of 1999 (PRC Sections 71200-71271); federal Water Pollution Control Act (as amended by the Clean Water Act of 1977. The proposed Project or an alternative would not result in a substantial disruption of biological communities and would not result in the take of protected species or migratory birds or loss of critical habitat; therefore, the proposed Project or an alternative would be consistent with these requirements.
Cultural Resources Protection	National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 CFR 800); the Archaeological and Historical Preservation Act and Executive Order 11593 "Protection and Enhancement of the Cultural Environment." In compliance with federal laws, regulations, and other guidelines, the USACE will use this Draft EIS/EIR and resource evaluation studies (e.g., Jones & Stokes, 2001 and CDM, 2009) to consult with the State Historic Preservation Officer (SHPO) if the USACE determines the proposed action may affect cultural resources listed or eligible for listing on the National Register of Historic Places. While the proposed Project (and Alternatives 4, 5 and 6) would result in the demolition of structures, none of these structures is listed or appears eligible for listing on the National Register of Historic Places, nor is it expected than other potential cultural resources are present that would be listed or eligible for listing on the National Register of Historic Places; therefore, it is anticipated that Section 106 consultation with the SHPO will not be required (refer to Section 3.4, Cultural Resources, and Appendix G for the memorandum documenting the Project site building survey results).

Table 2-5: Applicable Statutes, Plans, Policies, and Other Regulatory Requirements

Act/Plan/Policy	Description
Environmental Justice	Executive Order 12898 requires that "to the greatest extent practicable, each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations." California adopted legislation addressing environmental justice in 1999 with the passage of Senate Bill (SB) 115 (Government Code Section 65040.12[c]), which established the Governor's Office of Planning and Research as the lead agency responsible for implementation of federal and state environmental justice policies in California. SB 115 defines environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws and policies." In 2000, the Governor signed the related SB 89 requiring that the Secretary for Environmental Protection convene a Working Group to assist California Environmental Protection Agency (CalEPA) in developing an environmental justice strategy. This Draft EIS/EIR includes an environmental justice analysis (Chapter 5) and is thus consistent with requirements and policies pertaining to environmental justice.