

Section 3.6

Greenhouse Gas Emissions

SECTION SUMMARY

This section describes greenhouse gas (GHG) emissions associated with the existing Berths 121-131 Container Terminal operation and potential impacts of GHG emissions associated with construction and operation of the Proposed Project or an alternative.

Section 3.6, Greenhouse Gas Emissions, provides the following:

- a description of the existing setting as it relates to Port GHG emissions and climate change;
- a description of applicable local, state, and federal regulations and policies regarding GHGs;
- a discussion on the methodology used to determine whether the Proposed Project or the alternatives would result in an impact to GHG emissions and climate change;
- an impact analysis of the Proposed Project and alternatives; and
- a description of any mitigation measures proposed to reduce any potential impacts and residual impacts, as applicable.

Key Points of Section 3.6:

Greenhouse gas emissions from the Proposed Project, the No Project Alternative (Alternative 1), and the No Federal Action Alternative (Alternative 2) would exceed CEQA significance thresholds prior to mitigation. Mitigation measures, as summarized below, would be applied to the Proposed Project and to Alternative 2. Mitigation measures cannot be applied to Alternative 1.

MM GHG-1: LED Lighting.

MM GHG-2: GHG Reduction Offsets.

Air quality mitigation measures directed at construction-related sources would also reduce GHG emissions for vessels, dredging equipment, on-road trucks, and other off-road equipment used in construction activities for the Proposed Project and Alternative 2:

MM AQ-2: On-Road Trucks Used during Construction.

MM AQ-3: Non-Road Construction Equipment.

MM AQ-4: Cargo Ships Used During Construction.

MM AQ-5: Dredging Non-Road Equipment.

MM AQ-6: General Construction Mitigation Measure.

MM AQ-7: Renewable Diesel Fuel for Construction Equipment and On-Road Trucks

In addition, the following air quality mitigation measures related to operations, identified in Section 3.2, Air Quality and Meteorology and described below in Section 3.6.5, would also reduce GHG emissions:

1 **MM AQ-8: Vessel Speed Reduction Program (VSRP).**

2 **MM AQ-10: Cleanest Available Cargo-Handling Equipment Emissions Standards.**

3 LAHD's lease measures LM AQ-1 and LM AQ-2 would also be included in the tenant's lease. Although
4 not quantified, these measures would further reduce future GHG emissions.

5 **LM AQ-1: Zero Emission Cargo Handling Equipment (CHE) Transition.**

6 **LM AQ-2: Priority Access for Drayage Trucks.**

7 After the application of these mitigation and lease measures, impacts would be less than significant
8 under CEQA for the Proposed Project and for Alternative 2.

9 As discussed further in Section 3.6.5.3, no federal significance threshold under NEPA for GHG
10 emissions has been established at this time. Therefore, a NEPA significance determination for the
11 disclosed GHG emissions is not made for the Proposed Project and alternatives. Consistency with
12 federal, statewide, and local plans and policies related to GHG is discussed for informational purposes
13 only.

3.6.1 Introduction

This section evaluates the GHG emissions and climate change issues associated with the Proposed Project and alternatives. Activities from construction and operation of the Proposed Project would result in GHG emissions to the immediate Project area and the surrounding region. This section includes a description of the affected environment, including a discussion of the state of climate change science; the regulatory setting; predicted impacts of the Proposed Project; and mitigation measures to address the impacts.

3.6.2 Environmental Setting

3.6.2.1 Geographic Setting

The Project site is located in the Port of Los Angeles within the City of Los Angeles, which is in the southwest coastal area of the South Coast Air Basin (Basin). The Basin consists of the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air basin covers an area of approximately 15,500 square kilometers (6,000 square miles) and is bounded on the west by the Pacific Ocean; on the north and east by the San Gabriel, San Bernardino, and San Jacinto mountains; and on the south by San Diego County.

3.6.2.2 Greenhouse Gas Pollutants

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The term GHGs includes gases that contribute to the natural greenhouse effect, such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), as well as artificially derived anthropogenic pollutants, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These last three families of gases, while not naturally present in the atmosphere, also have properties that cause them to trap infrared radiation when they are present. Together, these six gases comprise the major GHGs that are recognized by the Kyoto Accords (United Nations 1998).

The effect each of these gases has on global warming is a combination of the volume of their emissions and their 100-year global warming potential (GWP). GWP is a unitless quantity that measures how much a gas will contribute to global warming relative to the same mass of CO₂. CH₄ and N₂O are substantially more potent than CO₂, with 100-year horizon GWPs of 29.8 and 273, respectively (IPCC 2021). However, artificially derived pollutants such as SF₆, HFCs, and CFCs, have been found to have substantially larger GWP values. Sulfur hexafluoride has one of the largest GWP values 23,900, and CFCs and HFCs have GWPs as high as 16,200 and 14,600, respectively (IPCC 2021). For consistency amongst pollutants, GHG emissions are typically reported in terms of metric tons (“tonnes,” or “MTon,” equivalent to 1,000 kilograms) of carbon dioxide equivalents (CO₂e), which are calculated as the product of the mass emitted of a given GHG and its specific GWP. In this document, the unit “metric tons” is used to report GHG emissions.

Arguably, the most important GHG in human-induced global warming is CO₂. While many gases have much higher GWPs than the naturally occurring GHGs, CO₂ is emitted in vastly higher quantities and accounts for 79 percent of the GWP of all GHGs emitted by the United States in 2020 (USEPA 2022). Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions and thus substantial increases in global atmospheric CO₂.

1 concentrations over the last century. In 2022, the atmospheric CO₂ concentration was
2 about 417 parts per million, substantially exceeding the natural range over the last
3 800,000 years (NOAA 2022). The buildup of CO₂ in the atmosphere is a result of
4 increased emissions and its relatively long lifespan in the atmosphere of 50 to 200 years
5 (NOAA 2022).

6 Concentrations of the second most prominent GHG, CH₄, have also increased due to
7 human activities such as rice production, degradation of waste in landfills, cattle
8 farming, and natural gas mining. In 2021, the atmospheric level of CH₄ was 162%
9 greater than pre-industrial levels, at 1,895 parts per billion (NOAA 2022). CH₄ has a
10 relatively short atmospheric lifespan of only 12 years, but it has a higher GWP than CO₂.

11 Concentrations of nitrous oxide (N₂O) have increased from about 270 parts per billion in
12 pre-industrial times to about 334 parts per billion in 2021 (NOAA 2022). These elevated
13 concentrations are attributed to shifting agricultural practices (such as soil and manure
14 management), fossil-fuel combustion, and the production of some acids. N₂O is a
15 significant contributor to atmospheric warming as a result of its long atmospheric
16 lifespan (120 years) in conjunction with its relatively large GWP.

17 Lastly, sulfur hexafluoride (SF₆), chlorinated fluorocarbons (CFCs) and
18 hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) are all artificially derived
19 pollutants that contribute to atmospheric warming. These gases are most commonly used
20 in electrical industries or as refrigerants. Although their presence in the atmosphere is
21 proportionally small, these gases' long atmospheric lifespans have categorized them as
22 significant contributors to global warming. Studies estimate that these gases can persist
23 within the atmosphere between 32,000 and 50,000 years.

24 GHGs differ from criteria pollutants in that GHG emissions do not cause direct adverse
25 human health effects. Rather, their indirect impacts to human health via global warming
26 is a cause for concern. Elevated atmospheric temperatures are likely to contribute to the
27 increased occurrence of extreme weather events such as heat waves and precipitation
28 events. Rising temperatures related to human activities likely contributed to Arctic sea-
29 ice loss, an increase in upper ocean temperature, and global sea level rise during the
30 latter half of the 20th century. As a result of continued growing concentrations of GHGs
31 in the atmosphere, the trends observed in the past century such as oceanic warming and
32 acidification, are expected to occur at a faster pace in the 21st century. (IPCC 2013;
33 IPCC 2014; IPCC 2023).

34 Current predictions suggest that in the next 25 years California will experience longer
35 and more extreme heat waves, greater frequency of heat waves, and longer dry periods.
36 More specifically, the California's Fourth Climate Change Assessment (OPR et al.
37 2018) forecasts that California could witness the following events:

- 38 • Temperature rises of 2.7 to 8.8°F by the 2070–2100-time period;
- 39 • Sea level rises of 1.1 to 1.9 feet by 2050 and over 9 feet by 2100;
- 40 • Continually reduced snowpack to less than two-thirds of the historical average
41 by 2050 and to less than half or even one third by 2100; and
- 42 • Increased fire risk resulting in estimated burned area increases of 77 percent to
43 178 percent by the end of the century and increases in extreme wildfire
44 frequency of 50 percent.
- 45 • For the Port of Los Angeles specifically, data from the Cal-Adapt tool (CEC
46 2023) indicate that the harbor area could experience the following changes:

- 1 • Temperature increases of 3.2 to 3.9°F by mid-century (2035-2064) and 4.2 to
- 2 7.0°F by end of the century (2070-2099);
- 3 • Increases in the annual number of extreme heat days (i.e., days above the
- 4 historical 98th percentile temperature of 93.7°F) of 3 to 4 days by mid-century
- 5 and 5 to 12 days by the end of the century; and
- 6 • Small increases in the maximum 1-day precipitation of approximately 0.15 to
- 7 0.23 inches by the end of the century relative to the historical baseline (1961-
- 8 1990) value of 1.63 inches.
- 9 • The latest sea level rise scenarios from NOAA (Sweet et al. 2022) indicate that
- 10 the median sea level rise in Los Angeles could range from approximately 0.4 to
- 11 1.1 feet by 2050 and 0.6 to 6.3 feet by 2100 relative to a baseline year of 2000.

12 **3.6.3 GHG Reduction Regulations, Plans and Policies**

13 Climate change has only recently been widely recognized as a threat to the global
 14 climate, economy, and population. As a result, the climate change regulatory setting—
 15 federal, state, and local—is complex and evolving. This section identifies key GHG
 16 legislation, executive orders, regulations, plans, policies, and seminal court cases related
 17 to GHG reduction and climate change relevant to the Proposed Project.

18 **3.6.3.1 Federal**

19 **Federal Action on Greenhouse Gas Emissions**

20 **April 2007 Supreme Court Ruling**

21 In Massachusetts et al. v. Environmental Protection Agency et al. (2007) [549 U.S. 497](#),
 22 the U.S. Supreme Court ruled that GHGs were air pollutants within the meaning of the
 23 Clean Air Act and that the act authorizes the USEPA to regulate CO₂ emissions from
 24 new motor vehicles, should those emissions endanger the public health or welfare. The
 25 Court did not mandate that the USEPA enact regulations to reduce GHG emissions but
 26 found that the only instances where the USEPA could avoid taking action were if it
 27 found that GHGs do not contribute to climate change or if it offered a “reasonable
 28 explanation” for not determining that GHGs contribute to climate change.

29 On December 7, 2009, the USEPA Administrator signed two distinct findings regarding
 30 GHGs under Section 202(a) of the Clean Air Act.

- 31 • Endangerment Finding: the USEPA Administrator found that the current and
- 32 projected concentrations of the six key well-mixed GHGs - CO₂, CH₄, N₂O,
- 33 HFCs, PFCs, and SF₆ - in the atmosphere threaten the public health and welfare
- 34 of current and future generations.
- 35 • Cause or Contribute Finding: the USEPA Administrator found that the
- 36 combined emissions of these well-mixed GHGs from new motor vehicles and
- 37 new motor vehicle engines contribute to the GHG pollution that threatens public
- 38 health and welfare.

39 The findings themselves did not impose any requirements on industry or other entities.
 40 However, this action was a prerequisite to finalizing the USEPA’s proposed GHG
 41 emissions standards for light-duty vehicles (USEPA 2009).

Federal Vehicle Emissions Standards

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States (i.e. the corporate average fuel economy – CAFE – standards). Pursuant to the act, the USEPA and National Highway Traffic Safety Administration (NHTSA) are responsible for establishing additional vehicle standards. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle (USEPA, 2012). The State of California harmonized its vehicle efficiency standards through 2025 with the federal standards through the Advanced Clean Cars Program.

In 2019, the USEPA issued a final rule, known as the Safer Affordable Fuel-Efficient Vehicle (SAFE) Rule, that established new fuel economy standards for light-duty vehicle fleets for the years 2021-2026 and rescinded the California waiver under the Federal Clean Air Act that allowed California to issue its own motor vehicle emission standards for greenhouse gases. The SAFE Rule was judicially challenged, and in March 9, 2022, USEPA reinstated California’s waiver; in 2025 the federal government again rescinded the waiver.

3.6.3.2 State

California has enacted a variety of laws and promulgated numerous rules and regulations that relate to climate change, many of which set aggressive goals for GHG reductions within the state. The discussion below provides a brief overview of the CARB and Office of Planning and Research documents and of the primary executive orders and legislation that relate to climate change and that may affect the GHG emissions associated with the Proposed Project or alternative.

Assembly Bill 32 and Senate Bill 32

The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set emissions limits to achieve 2000 levels of GHGs by 2010 and 1990 levels by 2020. This bill codified the 2020 target set in Executive Order S-3-05 (June 1, 2005), which included an additional goal of 80% below 1990 levels by 2050. CARB reported that the 2020 goal was achieved in 2016, four years ahead of schedule.

SB-32, enacted in 2016, codified the interim goal of 40% below 1990 levels by 2030 set in Executive Order B-30-15 (enacted in 2015). This interim target was established in order to ensure the state meets the EO S-3-05 target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. To facilitate achievement of this goal, EO B-30-15 called for an update to CARB’s Climate Change Scoping Plan (see below).

Executive Order B-55-18

On September 10, 2018, Governor Brown signed EO B-55-18, committing California to total, economy-wide carbon neutrality by 2045. The order directs CARB to work with relevant State agencies to develop a framework to implement and accounting that tracks progress toward this goal.

CARB Climate Change Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial Scoping Plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State’s long-range climate objectives (CARB 2009a, 2009b).

In December 2017, CARB approved the 2017 Climate Change Scoping Plan Update (CARB 2017), which built upon the existing AB 32 Scoping Plan and provided further guidance to meet the new statewide GHG reduction goal under SB 32 of 40 percent below 1990 emission levels by 2030.

In December 2022, CARB released the 2022 Scoping Plan Update (CARB 2022). The 2022 Scoping Plan Update assesses progress towards achieving the Senate Bill 32’s 2030 target and lays out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update outlines a sector by-sector roadmap for California to achieve carbon neutrality by 2045 or earlier. It aims to reduce anthropogenic emissions to 85% below 1990 levels by 2045 using technically feasible and cost-effective solutions. The 2022 Scoping Plan Update focuses on electrification of transportation, homes and buildings, and phasing out fossil fuels. In hard-to-electrify sectors, new solutions such as renewable hydrogen and biomethane are leveraged to achieve emissions reductions.

- CARB’s 2022 Scoping Plan Update outlines a number of actions for the Scoping Plan Scenario in that document’s Table 2-1. The list below represents the actions which are most relevant to the Project:
- GHG Emissions Reductions Relative to the SB 32 Target: 40% below 1990 levels by 2030;
- Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs): 100% of LDV sales are ZEV by 2035;
- Truck ZEVs: 100% of medium-duty (MDV)/HDV sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report);
- Low Carbon Fuels for Transportation: Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.

In addition to the previous focus areas, the 2022 Scoping Plan Update developed a table of priority GHG reduction strategies that can be utilized by local governments (Table 1 in Appendix D of the 2022 Scoping Plan Update).

Executive Order N-79-20

Governor Newsom signed EO N-79-20 stating that “clean renewable fuels play a role as California transitions to a decarbonized transportation sector.” EO N-79-20 directs “to support the transition away from fossil fuels consistent with the goals established in this Order and California’s goal to achieve carbon neutrality by no later than 2045, the California Environmental Protection Agency and the California Natural Resources Agency, in consultation with other State, local and federal agencies, shall expedite regulatory processes to repurpose and transition upstream and downstream oil production facilities ...” The Governor’s Order also directs CARB to “develop and propose strategies to continue the State’s current efforts to reduce the carbon intensity of fuels beyond 2030 with consideration of the full life cycle of carbon.

Executive Order S-01-07: Low Carbon Fuel Standard

Executive Order S-01-07 established a statewide goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent from 2005 levels by 2020. The Low Carbon Fuel Standard (LCFS), a discrete early action item in the original Scoping Plan, was approved by CARB in 2009, with amendments implemented on January 1, 2013. In September 2018, CARB extended the LCFS program to 2030, making significant changes to the design and implementation of the program including doubling the statewide carbon intensity reduction to 20 percent by 2030. The extension also added new crediting opportunities to promote zero-emission vehicle adoption and advanced technologies to achieve deep decarbonization in the transportation sector. Compliance with the LCFS will be based on a combination of strategies involving lower carbon fuels and more efficient, advanced-technology vehicles.

Renewable Portfolio Standard, Senate Bill 100 & Executive Order B-55-18

California's Renewable Portfolio Standard (RPS) was first established in 2002 through Senate Bill (SB) 1078, as a regulation requiring electric utilities and retail electricity providers to provide customers with a stated minimum of share of electricity generated from renewable resources. The RPS was revised, and its goals accelerated through SB 350. The latest revisions affecting RPS were done through SB 100 (SB100) and Executive Order B-55-18.

On September 10, 2018, Governor Brown signed SB 100, which established that 100% of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also created new standards for the RPS goals that were separately established by SB 350, increasing electricity from renewable sources from 50% to 60% by 2030 with specific interim targets.

On the same day that SB 100 was signed, Governor Brown signed Executive Order (EO) B-55-18 with a new state-wide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045. Specifically, it set a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources, including those such as solar and wind energy that do not emit climate-altering greenhouse gases.

Assembly Bill 1493 (Mobile Source Reductions)

AB 1493 ("the Pavley Standard") required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the EPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. EPA initially denied the waiver request but in 2009, following litigation, granted the waiver to California for its GHG emission standards for motor vehicles. CARB's approach to passenger vehicles combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California.

Executive Order S-13-08

In 2008, Governor Arnold Schwarzenegger signed EO S-13-08, which called on state agencies to develop a strategy for identification and preparation for expected climate change impacts in California. The resulting 2009 California Climate Adaptation Strategy report was developed by the California Natural Resources Agency in coordination with CAT. The report presents best available science relevant to climate impacts in California and proposes a set of recommendations for California decision makers to assess vulnerability and promote resiliency in order to reduce California's vulnerability to climate change. In addition to requiring the CAT to create a Climate Adaptation Strategy, EO-S13-08 ordered the creation of a comprehensive Sea Level Rise Assessment Report, which was completed by the National Academy of Science in 2012 (NAS, 2012). Guidance regarding adaptation strategies is general in nature and emphasizes incorporation of strategies into existing planning policies and processes.

EO-S-13-08 called for the California Ocean Protection Council to work with the other CAT state agencies to develop interim guidance for assessing the potential impacts of sea level rise (SLR) due to climate change in California. In coordination with National Academy of Science efforts, the council drafted interim guidance recommending that state agencies consider a range of SLR scenarios for the years 2050 and 2100 in order to assess project vulnerability, reduce expected risks, and increase resiliency to SLR. The draft resolution and interim guidance document is consistent with the Ocean Protection Act (Division 26.5 PRC Section 35615(a)(1)), which specifically directs the California Ocean Protection Council to coordinate activities of state agencies to improve the effectiveness of state efforts to protect ocean resources.

Senate Bill 97 (CEQA Guidelines)

SB 97 required that the California Natural Resources Agency coordinate on the preparation of amendments to the CEQA Guidelines regarding feasible mitigation of GHG emissions or the effects of such emissions. Pursuant to SB 97, the agency adopted CEQA Guidelines amendments and transmitted the Adopted Amendments and the entire rulemaking file to the Office of Administrative Law in 2009. The amendments became effective on March 18, 2010.

With respect to the significance assessment, CEQA Guidelines Section 15064.4 subdivision (a), provides:

The determination of the significance of greenhouse gas emissions calls for careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

- (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or*
- (2) Rely on a qualitative analysis or performance-based standards.*

Guideline Section 15064.4, subdivision (b), further indicates:

1 (b) A lead agency should consider the following factors, among others, when
2 assessing the significance of impacts from GHG emissions on the environment:

3 (1) The extent to which the project may increase or reduce GHG emissions as
4 compared to the existing environmental setting;

5 (2) Whether the project emissions exceed a threshold of significance that the lead
6 agency determines applies to the project;

7 (3) The extent to which the project complies with regulations or requirements
8 adopted to implement a statewide, regional, or local plan for the reduction or
9 mitigation of GHG emissions. Such requirements must be adopted by the relevant
10 public agency through a public review process and must reduce or mitigate the
11 project's incremental contribution of GHG emissions. If there is substantial
12 evidence that the possible effects of a particular project are still cumulatively
13 considerable notwithstanding compliance with the adopted regulations or
14 requirements, an EIR must be prepared for the project.

15 The amendments also provide that lead agencies should consider all feasible means of
16 mitigating GHG emissions that substantially reduce energy consumption or GHG
17 emissions. These potential mitigation measures may include carbon sequestration. If
18 offsite or carbon offset mitigation measures are proposed, they must be part of a
19 reasonable plan of mitigation that the agency itself is committed to implementing. No
20 threshold of significance or any specific mitigation measures are indicated.

21 Among other things, the California Natural Resources Agency noted in its public notice
22 for these changes that impacts of GHG emissions should be considered in the context of
23 a cumulative impact, rather than a project impact. The public notice states:

24 *While the Proposed Amendments do not foreclose the possibility that a single*
25 *project may result in greenhouse gas emissions with a direct impact on the*
26 *environment, the evidence before [CNRA] indicates that in most cases, the impact*
27 *will be cumulative. Therefore, the Proposed Amendments emphasize that the*
28 *analysis of greenhouse gas emissions should center on whether a project's*
29 *incremental contribution of greenhouse gas emissions is cumulatively considerable.*

30 **California Sustainable Freight Action Plan**

31 In response to Executive Order B-32-15, the California State Transportation Agency,
32 California Environmental Protection Agency, the Natural Resources Agency, and other
33 state departments developed the California Sustainable Freight Action Plan in July 2016.
34 The plan established recommendations and targets to improve freight efficiency,
35 transition to zero-emission technologies, and make California's freight system more
36 competitive. The recommendations include:

- 37 • A long-term 2050 Vision and Guiding Principles for California's future freight
38 transport system;
- 39 • Targets for 2030 to guide the State toward meeting the Vision;
- 40 • Opportunities to leverage State freight transport system investments;
- 41 • Actions to initiate over the next five years to make progress towards the Targets
42 and the Vision;
- 43 • Pilot projects to achieve on-the-ground progress in the near-term;
- 44 • Additional concepts for further exploration and development, if viable.

1 The targets are not mandates but are aspirational measures of progress. Plan measures
2 are conceptual and rely on the future development of regulations to implement the
3 strategies. Plan strategies include on-dock and near-dock strategies to shift goods
4 movement from truck to rail.

5 **Ocean Going Vessels At-Berth Regulation**

6 In December 2007, the original Ocean-Going Vessels At-Berth Regulation was
7 approved, which set control requirements for emissions from container, refrigerated
8 cargo (reefer), and cruise vessels while hotelling at berth. The At-Berth Regulation was
9 amended on December 30, 2020, increasing its requirements for already-covered vessel
10 types, and expanding its requirements to include auto carriers (roll-on/roll-off vessels)
11 and tanker ships to control hoteling emissions at-berth starting in 2025 for the Ports of
12 Los Angeles and Long Beach. Even though this regulation is meant to curtail local
13 criteria pollutant emissions, it may have some co-benefits for reducing GHGs if
14 controlled in conjunction with renewable-based electricity.

15 **Other Pending CARB Rules**

16 On January 13, 2025, CARB sent letters to the USEPA withdrawing CARB's requests
17 for EPA's Clean Air Act (CAA) waivers allowing CARB to implement and enforce the
18 following adopted state regulations:

- 19 • Advanced Clean Fleets (ACF) – Complete Withdrawal
- 20 • In-Use Locomotive Standards - Complete Withdrawal
- 21 • Commercial Harbor Craft – Partial Withdrawal
- 22 • Transport Refrigeration Unit (TRU) Engine Standards - Partial Withdrawal

23 The ACF, locomotive, and TRU rules contained provisions (see Section 3.1.3.3 for
24 descriptions of these rules) mandated conversion to zero-emission technologies by
25 certain dates, which would have resulted in substantial GHG emissions reductions.
26 Accordingly, emissions reduction credit implementation of these rules could not be
27 included in the Draft EIS/EIR's analysis.

28 **3.6.3.3 Local and Regional**

29 **South Coast Air Quality Management District**

30 **SCAQMD GHG CEQA Thresholds**

31 In 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA
32 GHG significance threshold for projects where the SCAQMD is the lead agency. To
33 date, the board has adopted a threshold of 10,000 metric tons per year (mt) CO₂e
34 emissions per year to industrial projects, and the threshold has been a part of the
35 SCAQMD Air Quality Thresholds since 2011 (SCAQMD 2011).

36 **City of Los Angeles Policies**

37 **General Plan**

38 The Mobility Element of the General Plan (City of Los Angeles 2016) contains general
39 policies and objectives related to greenhouse gases. Specifically, one of the document's
40 overall policies calls for the City to target GHG reductions through more sustainable
41 transportation systems. One of the goals articulated in Chapter 5, Clean Environments

1 and Healthy Communities, is to meet a 19% per capita GHG reduction by 2035,
2 consistent with the SCAG RTP (i.e., Connect SoCal). The reductions in GHG emissions
3 from the cement industry to which lower-carbon construction binders would contribute
4 would forward those policies and goals.

5 **Green New Deal Sustainable City pLAN**

6 In 2019, Mayor Eric Garcetti launched an update to the Sustainable City pLAN (City of
7 Los Angeles 2015), which was, in turn, a replacement for the Green LA plan (City of
8 Los Angeles 2007). The update, LA's Green New Deal Sustainable City pLAN, aims to
9 model local governments' consistency with the Paris Climate Agreement (Garcetti
10 2019). Among its milestones and chapter goals related to goods movement are:

- 11 • Identify air quality hotspots in impacted communities from goods movement,
12 ports, and refineries by 2021;
- 13 • Develop an electric freight and commercial vehicle billing rate by 2035; and
- 14 • By 2050, reduce Port-related GHG emissions by 80% by:
 - 15 ○ Incorporating sustainable practices in tenant lease agreements at cargo terminals
16 by 2030;
 - 17 ○ Developing technology and pilot at-berth controls for liquid bulk vessels by
18 2028;
 - 19 ○ Deploying 50-100 zero emission trucks in a clean truck pilot by 2035; and,
 - 20 ○ Implementing an updated Clean Truck Program with prioritization on zero
21 emission trucks.

22 The specific measures for developing the Port-specific actions are included in the San
23 Pedro Bay Ports Clean Air Action Plan discussed below.

24 ***Los Angeles Department of Water and Power (LADWP) 2022 Power*** 25 ***Strategic Long-Term Resource Plan***

26 The Power Strategic Long-Term Resource Plan (LADWP 2022) describes the agency's
27 current facilities and programs that address GHG emissions reductions and outlines its
28 plans for achieving the GHG reduction goals of the Green New Deal Sustainable City
29 pLAN, SB100 (Renewable Portfolio Standard or RPS), and SB 32 while meeting the
30 City's projected electrical energy demands. In order to comply with state regulation,
31 LADWP has committed to transition to a 100% clean energy supply by 2035, which is
32 10 years earlier than the RPS mandate. Past and future actions include eliminating coal-
33 fired generation from its portfolio, building solar and other renewable generating
34 facilities, increasing generating efficiency, and promoting programs to increase
35 electrification of buildings.

36 **Port of Los Angeles Policies**

37 ***Port Climate Action Plan***

38 The 2007 Green LA Plan led to the Los Angeles Harbor Department (LAHD)'s
39 development of an individual Climate Action Plan, consistent with the goals of Green
40 LA, to examine opportunities to reduce GHG emissions from Port operations (such as
41 Port buildings and Port workforce operations).

42 In accordance with this directive, the Port's Climate Action Plan, developed in
43 December 2007, covers GHG emissions related to the Port's municipal activities (such

1 as Port buildings and Port workforce operations). The Climate Action Plan outlines
2 specific steps that LAHD has taken and will take on global climate change. These steps
3 include specific actions that will be taken for energy audits, green building policies,
4 onsite photovoltaic solar energy, green energy procurement, tree planting, water
5 conservation, alternative fuel vehicles, increased recycling, and green procurement. The
6 Climate Action Plan also identifies San Pedro Bay Ports Clean Air Action Plan (CAAP)
7 measures that have significant GHG reduction co-benefits, such as the Vessel Speed
8 Reduction Program (VSRP) and Alternative Marine Power (AMP). GHG reduction
9 needs from Port's tenant activities are recognized in the Port Climate Action Plan, but
10 are deferred to the CAAP, which addresses tenant operations.

11 In addition, the June 2008 Port of Los Angeles Sustainability Assessment contains an
12 assessment of existing programs and policies against the eight goals that were identified
13 in Executive Directive No. 10 on Sustainability Practices in the City of Los Angeles.
14 LAHD has also completed annual GHG inventories of the Port's municipal activities and
15 reported these to third-party registries since 2006. LAHD's Annual Inventory of Air
16 Emissions has also included GHG estimates for transportation activities associated with
17 goods movement for ocean-going vessels (OGVs), harbor craft, trucks, locomotives, and
18 cargo handling equipment since 2006. LAHD expanded the GHG inventories to include
19 an expanded geographical delineation for OGVs, trucks, and locomotives. These annual
20 inventories and their methodology reports can be found on the Port's website.

21 ***San Pedro Bay Ports Clean Air Action Plan***

22 The Ports of Los Angeles and Long Beach, with the participation and cooperation of the
23 USEPA, CARB, and SCAQMD staff, developed the San Pedro Bay Ports CAAP, a
24 planning and policy document that sets goals and implementation strategies to reduce air
25 emissions and health risks associated with port operations while allowing port
26 development to continue (SPBP 2006; SPBP 2010). Each individual CAAP measure is a
27 proposed strategy for achieving these emissions reduction goals.

28 The CAAP was updated in 2010 and most recently in 2017. The 2017 CAAP Update
29 (SPBP 2017) aligns with the California Sustainable Freight Action Plan, supports the
30 zero-emissions and freight efficiency targets set by the state and other agencies, and
31 contains a new focus on GHG reductions with a 2050 emissions reductions target. The
32 2017 CAAP emission reduction targets include:

- 33 • Reduce population-weighted residential cancer risk of Port-related diesel
34 particulate matter (DPM) emissions by 85 percent by 2020, compared to 2005
35 conditions;
- 36 • Reduce Port-related emissions by 59 percent for NO_x, 93 percent for SO_x and
37 77 percent for DPM emissions by 2023, compared to 2005 conditions;
- 38 • Reduce GHGs from Port related sources to 40 percent below 1990 levels by
39 2030; and
- 40 • Reduce GHGs from Port related sources to 80 percent below 1990 levels by
41 2050.

42 In addition, the 2017 CAAP Update incorporates commitments by the mayors of Los
43 Angeles and Long Beach to move towards zero emissions at the Ports, including setting
44 goals of zero-emissions cargo-handling equipment by 2030 and zero-emissions drayage
45 trucks by 3035. Accordingly, the updated CAAP includes provisions for new
46 investments in clean technology, expanded use of at-berth emission reduction
47 technologies, and a zero-emissions drayage truck pilot program.

1 The 2017 CAAP Update strategies may result in GHG reductions as older technologies
2 are replaced with newer, more fuel-efficient ones.

3 **City of Los Angeles Actions to Reduce Greenhouse Gas Emissions by** 4 **2050**

5 The “Actions to Reduce Greenhouse Gas Emissions by 2050 report (LAHD 2014)
6 outlines actions/strategies that are either being implemented or evaluated to continue the
7 reduction of GHG emissions and meet a target of 35 percent below 1990 levels by 2035
8 and 80 percent below 1990 levels by 2050. The creation of this report was a response to
9 Los Angeles City Council Motion No. 14-0907. The report lists GHG emissions
10 reduction strategies for Port operations as well as the applicable implementing programs.
11 The report does not identify new programs or measures. It lists existing initiatives and
12 reiterates the Port’s commitment to continued collaboration with the international
13 maritime community, as well as between all stakeholders and regulators.

14 **Additional Rules, Regulations and Policies**

15 In addition to the above rules, regulations, and policies that primarily focus on GHG
16 emission reductions, many of the rules, regulations and policies discussed in Section 3.2,
17 Air Quality and Meteorology, that reduce fuel consumption would have the co-benefit of
18 reducing GHG emissions. These include USEPA/NHTSA fuel economy standards and
19 truck idling restrictions under AB2650 and CARB’s idling emission reduction rule.

20 **3.6.4 Impacts and Mitigation Measures**

21 This section presents a discussion of the potential GHG emission impacts associated
22 with construction and operation of the Proposed Project and alternatives. Mitigation
23 measures are also discussed in this section.

24 **3.6.4.1 Methodology for Estimating Greenhouse Gas Emissions**

25 GHG emissions were estimated for the CEQA baseline, NEPA baseline, and
26 construction and operation of the Proposed Project and alternatives. In addition, indirect
27 GHG emissions from electricity use during both construction and operation of the
28 Proposed Project and alternatives were estimated.

29 Sources contributing to GHG emissions during construction of the Proposed Project and
30 Alternative 2 consist of the following:

- 31 • Off-road construction equipment;
- 32 • On-road construction trucks;
- 33 • Dredging equipment (Proposed Project only);
- 34 • Crane delivery ship (Proposed Project only);
- 35 • Harbor craft (i.e., tugs assisting crane delivery ships, dredging barges, and other
36 barges used in wharf construction activities - Proposed Project only); and
- 37 • Worker vehicles.

38 As noted in Section 3.2, Air Quality and Meteorology, sources contributing to GHG
39 emissions during operation of the Proposed Project and both alternatives consist of:

- 40 • Container ships (transit, anchoring, and hoteling);
- 41 • AMP electricity use during container ship hoteling;

- 1 • Tugboats assisting container ships during harbor transit, turning, and docking;
- 2 • Drayage trucks used to pick up and drop off containers at various destinations
- 3 throughout the region;
- 4 • Switcher and line haul locomotives associated with the West Basin Intermodal
- 5 Container Transfer Facility (WBICTF) operation;
- 6 • Cargo handling equipment on the terminal and WBICTF, including electrical
- 7 RMG cranes (except for Alternative 1);
- 8 • On-terminal electricity use by electrical equipment, exterior lighting fixtures,
- 9 and buildings; and
- 10 • Worker vehicles (light-duty automobiles).

11 The general approach to calculating emissions for the various emission sources during
12 construction and operation of the Proposed Project are discussed below. Detailed
13 construction and operational emission calculations are presented in Appendix A1.

14 The activity data (ship calls, truck trips, etc.) used in the GHG emission calculations for
15 baseline, construction, and operation are the same activity data used in Section 3.2, Air
16 Quality and Meteorology, and described in Appendix A1; therefore, the activity data
17 descriptions are not repeated here.

18 In brief, information about on-road and off-road equipment utilization anticipated during
19 construction was obtained from LAHD Engineering. The Proposed Project construction
20 activities would include dredging and the disposal of dredged material. As described in
21 Section 2.6, dredged material would be disposed of at an approved site, assumed for this
22 analysis to be a combination of the LA-2 ocean disposal site and an approved upland
23 site. The Proposed Project construction plan estimates that approximately 260,000 cubic
24 yards (cy) of dredged material would be disposed by truck in an upland facility and
25 approximately 50,000 cy could be removed by ocean disposal via tug and barge. This
26 scenario is expected to result in higher emissions than a scenario where the entire dredge
27 material would be disposed upland.

28 Information about container ships, harbor craft, cargo handling equipment, and facility
29 energy consumption was provided by LAHD for the CEQA baseline period (2019), and
30 projected based on expected container throughput projections for future analysis years.
31 Information about drayage truck trips, worker trips, and rail activity was obtained from
32 the LAHD staff and transportation section of this Draft EIS/EIR (Section 3.6, Ground
33 Transportation) and included in Appendix A1. Indirect GHG emissions from on-terminal
34 electricity consumption were based on baseline electricity-consumption information
35 provided by WBCT and projected into the future based on cargo throughput and AMP
36 utilization projections (see Section 3.2, Air Quality and Meteorology, and Appendix
37 A1).

38 Emissions and emission factors used to calculate GHGs associated with the CEQA
39 baseline, NEPA baseline, and Proposed Project and alternatives are presented in detail in
40 Appendix A1 and summarized as follows:

- 41 • Based on the major sources associated with the Proposed Project, GHG
- 42 emissions (CO₂, CH₄, and N₂O) from on-road and off-road equipment were
- 43 calculated based on emission factors derived from CARB's EMFAC2021 and
- 44 OFFROAD2021 Emission Inventory Tool.
- 45 • Container and crane delivery ship emissions were based on emission factors
- 46 identified in the Port Emission Inventory Methodologies (Starcrest 2023).

- 1 • Harbor craft engine emissions were based on emission factors derived from the
2 CARB 2021 Commercial Harbor Craft Model
- 3 • Emissions from cargo handling equipment were based on emission factors
4 derived from the CARB's OFFROAD2021 model. Emission factors were
5 adjusted in calculations for future years' operations by considering usage
6 growth, attrition, and CARB adopted regulations. Propane equipment emission
7 factors are those used in the 2019 Port Emissions Inventory and natural gas
8 emission factors are from the certification data.
- 9 • Drayage truck emissions were based on the EMFAC2021 POLA T7 Class 8
10 fleet mix and EMFAC2021 emission factors.
- 11 • Switching and line haul locomotive emissions were based on emission factors
12 identified in the 2019 Port Emissions Inventory (POLA, 2020) and the CARB
13 rail emission inventory forecasts (CARB, 2021e).
- 14 • Drayage truck emissions were calculated to the first destination (e.g.,
15 warehouse, railyard, transload facility) in the form of average truck trip length,
16 locomotive emissions to the California state boundary, and OGV emissions from
17 the over-water California state boundary to the berth.
- 18 • Indirect GHG emissions from electricity consumption on-site for the baseline
19 were based on electrical consumption records for 2019 obtained from WBCT.
20 The electrical consumption in the future was projected based on the terminal's
21 projected throughput and container ship activity. GHG emission factors for
22 electrical consumption were based on emission factors for the Los Angeles
23 Department of Water and Power (LADWP 2023). Because the emission factor is
24 presented in CO₂e, individual emissions for the various greenhouse gases (i.e.,
25 CO₂, CH₄, or N₂O) are not estimated for electrical consumption.

26 ***Analysis of Sea Level Rise***

27 In addition to evaluating the GHG emissions from the Proposed Project and both
28 alternatives, the potential impact of SLR resulting from global climate change on the
29 Proposed Project was also considered. The most relevant studies of SLR are the updated
30 guidance from the State of California (OPC 2018) and the Port of Los Angeles' Sea
31 Level Rise Adaptation Study (LAHD 2018). Both studies recognize the uncertainty of
32 SLR projections, particularly beyond approximately 2050, and offer multiple potential
33 future scenarios of SLR under different assumptions of GHG emissions, ice cap melting,
34 and other factors. The State's study recommends selecting a level of risk aversion (low,
35 medium-high, extreme) in order to select an appropriate future SLR scenario (for the
36 Proposed Project, low risk aversion would be appropriate, given that the Berths 121-131
37 Terminal would not involve critical infrastructure or hazardous materials for which SLR
38 impacts would be serious). The State's study uses a high-emissions assumption through
39 2050 to estimate SLR. The Port's SLR estimates, which are based on an earlier National
40 Research Council study, do not include a consideration of risk aversion levels but do
41 incorporate a high-emissions scenario. The Port's study considers horizon years of 2030,
42 2050, and 2100 and three scenarios of global warming (low, mid-range, high). The
43 Port's study focuses on Port infrastructure by predicting inundation and flooding under
44 various scenarios of SLR, high tides, and storm tides, whereas the State's study is a
45 more general consideration of SLR alone along the California coast.

46 To evaluate the effects of SLR on a proposed project, the State's study recommends
47 considering project life when selecting horizon years and SLR scenarios. The Proposed

1 Project would be expected to have a maximum service life of 50 years and would
2 therefore operate at least until 2050 but not until 2100. To be conservative, however, this
3 analysis considers both the 2050 and the 2100 horizon years.

4 **3.6.4.2 Geographic Boundaries**

5 For the purpose of assessing GHG impacts under CEQA, the Proposed Project and
6 project alternatives, GHG emissions were calculated to the California border both on
7 land and on water except as described below. For the purposes of assessing GHG
8 impacts under NEPA, the analysis conservatively reflects emissions calculated to the
9 California border, even though the federal scope of analysis extends only to the East LA
10 railyards, not the California border. Emissions from Proposed Project-related container
11 ships, trucks, and trains were calculated as follows:

- 12 • Container ship GHG emissions were calculated up to the northern 170 nm
13 shipping route since it represents the longest distance that ships would travel to
14 and from the Port while within CARB's California in-state boundary, which
15 extends out 24 miles from the barrier islands. Truck and automobile emissions
16 were calculated based on roadway link-by-link traffic volume and speed data
17 generated for this EIS/EIR (see Section 3.6, Ground Transportation). The
18 roadway link network extended all the way to the SCAB border with the
19 exception of a few links that spill over the SCAB border.
- 20 • Locomotive emissions were calculated based on train travel data within the
21 Basin and up to the State border (see Section 3.6, Ground Transportation). The
22 train-miles were computed after routing trains and multiplying the trains with
23 route miles (estimated using mileage data for control points/stations on rail
24 subdivisions and confirmed using Google Map distance measurement tool).
- 25 • All electrical power production was assumed to be generated within the state for
26 calculating emissions associated with electric power demand. Carbon footprint
27 of electricity consumption would be based on the Southern California energy
28 mix in 2019 provided by LADWP.
- 29 • This document acknowledges that GHG emissions extend beyond state borders.
30 However, origin and destination data for out-of-state emissions over the life of
31 the Proposed Project or an alternative do not exist and would be speculative on a
32 project-specific level.
- 33 • The focus of the SLR analysis is the terminal. Although truck and train routes
34 within the Port were also considered, the lack of project-specific SLR
35 information mandates addressing transportation routes in general terms.

36 **3.6.4.3 Baselines**

37 **CEQA Baseline**

38 As described in Section 2.6, calendar year 2019 was deemed the appropriate CEQA
39 baseline. Therefore, the CEQA baseline takes into account the throughput for January
40 through December 2019. In 2019, the Berth 121-131 Container Terminal was used for
41 containerized cargo import and export. The terminal encompassed approximately 186
42 acres under its long-term lease, supported five cranes, and handled approximately
43 353,924 TEUs and 153 oceangoing vessel calls. The CEQA baseline conditions are
44 summarized in Table 2-1 of Section 2.5. Table 3.6-1 presents the annual baseline GHG
45 emissions in 2019 in metric tons per year (mty).

Table 3.6-1: Operational GHG Emissions (mty) — CEQA Baseline (2019)

Source Category	CO ₂	CH ₄	N ₂ O	CO _{2e} ¹
OGV - Transit and Anchoring ¹	35,525	< 1	1.72	36,017
OGV – Hoteling	5,059	< 1	< 1	5,135
Harbor Craft	182	< 1	< 1	185
CHE	6,095	< 1	< 1	6,105
Rail On-Site	308	< 1	< 1	311
Rail Off-Site	10,222	< 1	< 1	10,321
On-Site Trucks	1,614	< 1	< 1	1,695
Off-Site Trucks	14,229	< 1	2.27	14,861
Employee Commute On-Site	52	< 1	< 1	52
Employee Commute Off-Site	1,526	< 1	< 1	1,535
Backlands Electricity Consumption ²				1,274
AMP Electricity Consumption				45
Total Operational Year 2019	74,812	2.62	4.86	77,537

Notes:

[1] OGV - Transit and Anchoring also includes emissions from the AQMD Overwater Boundary to the Stateline.

[2] Backlands electricity includes electrical consumptions by buildings, lighting poles, wharf cranes and rail-mounted gantry cranes in the railyard.

[3] Emissions might not add precisely due to rounding.

[4] The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Future studies might use updated data, assumptions, and emission factors that were not available at the time of this document.

1 NEPA Effects

2 As discussed in more detail in Section 3.6.4.4, no determination of significance is made
3 under NEPA and the NEPA baseline is not relevant to this disclosure; the NEPA
4 disclosure of greenhouse gas emissions from the Proposed Project and the No Federal
5 Action Alternative in Tables 3.6.2 and 3.6-3 is for informational purposes only.

6 3.6.4.4 Thresholds of Significance

7 CEQA Significance Thresholds

8 CEQA Guidelines Appendix G suggests two criteria for determining the significance of
9 impacts related to GHG:

- 10 • VII(a). Would the project generate greenhouse gas emissions, either directly or
- 11 indirectly, that may have a significant impact on the environment?
- 12 • VII(b). Would the project conflict with an applicable plan, policy or regulation
- 13 adopted for the purpose of reducing the emissions of greenhouse gases?

14 The Initial Study (IS) in the NOP (Appendix A) eliminated VII(b) from further
15 consideration. However, additional review on consistency with relevant plans and
16 policies and regulations is included in the informational Section 3.5.7 below.

1 State CEQA Guidelines Section 15064.4(a) affords a lead agency discretion to evaluate
2 the significance of GHG emissions quantitatively – and to select the model or
3 methodology it considers appropriate for doing so, provided it supports its decision with
4 substantial evidence -- or qualitatively. CEQA Guidelines section 15064.4(b) sets forth
5 factors that should be considered by a lead agency when assessing the significance of
6 impacts from GHG emissions on the environment. These factors include:

- 7 • The extent to which a project may increase or reduce GHG emissions compared
8 with the existing environmental setting;
- 9 • Whether project emissions exceed a threshold of significance that the lead
10 agency determines applicable to a project;
- 11 • The extent to which a project complies with regulations or requirements adopted
12 to implement a statewide, regional, or local plan for the reduction or mitigation
13 of GHG emissions. Such requirements must be adopted by the relevant public
14 agency through a public review process and must reduce or mitigate the
15 project's incremental contribution of greenhouse gas emissions.

16 The guidelines do not specify significance thresholds and allow the lead agencies
17 discretion in how to address and evaluate significance based on these criteria. To provide
18 guidance to local lead agencies regarding determining significance for GHG emissions
19 in CEQA documents, SCAQMD convened the GHG CEQA Significance Threshold
20 Working Group. Members of the working group included government agencies that
21 implement CEQA and representatives from various stakeholder groups that provide
22 input to SCAQMD staff members regarding developing the GHG CEQA significance
23 thresholds.

24 On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal
25 regarding an interim GHG significance threshold for projects where SCAQMD is lead
26 agency. For industrial projects, a significance threshold of 10,000 mty of CO₂e
27 emissions was established. Construction GHG emissions, amortized over project life,
28 are required to be included in a project's annual GHG emissions totals
29 (SCAQMD, 2008). LAHD has determined that the SCAQMD-adopted 10,000 mty CO₂e
30 threshold is suitable for all LAHD projects for the following reasons:

- 31 • The SCAQMD industrial source threshold is appropriate for projects with future
32 operations continuing as far out as 2050. The SCAQMD threshold development
33 methodology (SCAQMD 2008) used the EO S-3-05 emission reduction targets
34 as the basis in developing the threshold, with the AB 32 reduction requirements
35 (2020) incorporated as a subset of EO S-3-05. EO S-3-05 sets an emission
36 reduction target of 80 percent below 1990 levels by 2050. AB 32 requires
37 California to reduce its GHG emissions to 1990 levels by 2020 (SCAQMD pers.
38 Comm. 2016
- 39 • The SCAQMD industrial source threshold is appropriate for projects with both
40 stationary and mobile sources, both of which are components of LAHD projects.
41 CAPCOA guidance (CAPCOA 2008) considers industrial projects to include
42 substantial GHG emissions associated with mobile sources. SCAQMD, on
43 industrial projects for which it is the lead agency, uses the 10,000 mty threshold
44 to determine CEQA significance by combining a project's stationary source and
45 mobile source emissions. Although the threshold was originally developed for
46 stationary sources, SCAQMD staff views the threshold as conservative for
47 projects with both stationary and mobile sources because it is applied to a
48 larger set of emissions and therefore captures a greater percentage of projects

1 than would be captured if the threshold was only used for stationary sources
2 (SCAMD pers. comm. 2016). For example, in one of its recent EIRs, the
3 SCAQMD applied the 10,000 mty threshold to a refinery project where the
4 mobile source emissions would increase and the stationary source emissions
5 (combined direct and indirect) would decrease relative to baseline. The mobile
6 source emissions included construction equipment, on-road vehicles, and on-
7 and off-site rail transport. Moreover, in the same EIR, the SCAQMD (2016) also
8 applied the 10,000 mty threshold to its list of related cumulative projects, two of
9 which were LAHD projects (SCIG and ILWU Local 13 Dispatch Hall) with
10 dominant mobile source emissions. The SCAQMD (pers. comm. 2015) also
11 specifically approved the use of the 10,000 mty threshold on another current
12 Port CEQA project dominated by mobile sources (LAHD 2017b).

- 13 • The SCAQMD industrial source threshold is appropriate for projects with
14 sources that use primarily diesel fuel. Although most of the sources that were
15 considered by the SCAQMD (2008) in the development of the 10,000 mty
16 threshold are natural gas-fueled, both natural gas and diesel combustion produce
17 CO₂ as the dominant GHG (The Climate Registry 2016). Furthermore, the
18 conversion of all GHG species into a CO₂e ensures that the GHG emissions
19 from any source, regardless of fuel type, can be evaluated equitably.
- 20 • The SCAQMD industrial source threshold is conservative for LAHD projects.
21 Based on the 10,000 mty threshold, it would capture approximately 90 percent
22 of regulated, permitted industrial facilities subject to the SCAQMD's Annual
23 Emission Reporting (AER) program (SCAQMD 2024). LAHD projects subject
24 to CEQA review usually far exceed this threshold because of their large size and
25 large number of mobile sources such as oceangoing vessels (OGVs), drayage
26 trucks, trains, and cargo handling equipment. A review of LAHD CEQA
27 documents certified between 2007 and 2016 (Port of Los Angeles 2016; GHG
28 emissions were not quantified in Port CEQA documents before 2007) shows that
29 the 10,000 mty threshold would have captured 98 percent of LAHD project
30 CO₂e emissions.

31 After considering these guidelines and LAHD-specific climate change impact issues,
32 LAHD has set the following thresholds for use in this EIR to determine the significance
33 of Proposed Project-related GHG impacts. The Proposed Project or alternative would
34 create a significant GHG impact if it:

35 **GHG-1: Generates GHG emissions that, either directly or indirectly, exceed the**
36 **SCAQMD 10,000 mty CO₂e threshold**

37 Impacts under GHG-1 are determined by comparing the combined amortized
38 construction and future operational emissions with the baseline scenario. Total
39 construction emissions are amortized over the life of the Proposed Project or alternative
40 and included in the CEQA impact determination.

41 As noted above, CEQA Guideline Section 15064.4(b) provides that one factor to be
42 considered in assessing the significance of GHG emissions on the environment is “the
43 extent to which a project complies with regulations or requirements adopted to
44 implement a statewide, regional or local plan for the reduction or mitigation of GHG
45 emissions.”

46 Several state, regional and local plans have been developed that set goals for the
47 reduction of GHG emissions over the next few years and decades. Some of these plans
48 and policies (notably, EO S-3-05 and AB 32) were taken into account by the SCAQMD

1 in developing the 10,000 mty CO₂e threshold. However, no regulations or requirements
2 have been adopted by relevant public agencies to implement those plans for specific
3 projects, within the meaning of CEQA Guidelines Section 15064.4(b)(3). Consequently,
4 no CEQA significance assessment based upon compliance with such regulations or
5 requirements can be made for the Proposed Project. Nevertheless, for the purpose of
6 disclosure, LAHD has considered for informational purposes only, whether the Proposed
7 Project activities, features, mitigations and lease measures are consistent with federal,
8 state or local plans, policies or regulations for the reduction of GHG emissions, as set
9 forth below:

10 Finally, State CEQA Guidelines Section 15126.2(a) identifies the need to evaluate
11 potential impacts of locating development in areas that are vulnerable to climate change
12 effects. The EIR “should evaluate any potentially significant impacts of locating
13 development in other areas susceptible to hazardous conditions (e.g., floodplains,
14 coastlines, wildfire risk areas).” Although no significance thresholds are defined for
15 evaluating the potential impacts of locating development in areas that are vulnerable to
16 climate change effects, the analysis addresses this evaluation qualitatively.

17 **NEPA Effects**

18 The USACE has established the position under NEPA that there are no science-based
19 GHG significance thresholds nor has the federal government or the state adopted any
20 regulations. In the absence of an adopted or science-based GHG standard, the USACE
21 does not utilize the Port of Los Angeles’ proposed GHG-1 CEQA significance threshold,
22 propose a new GHG significance threshold, or make a NEPA impact determination for
23 GHG emissions anticipated to result from the Proposed Project or any of the alternatives.
24 Rather, in compliance with the NEPA implementing regulations, the anticipated
25 emissions relative to the NEPA baseline are disclosed for the Proposed Project, the No
26 Project Alternative, and the No Federal Action Alternative without expressing a
27 judgment as to their significance.

28 **3.6.4.5 Impact Determination**

29 **Proposed Project**

30 As described in more detail in Section 2.5.1, construction of the Proposed Project would
31 include demolishing the existing wharf at Berths 126-129, deepening the berth by
32 dredging, reconstructing the existing rock dike, constructing a new, pile-supported
33 concrete wharf with Alternative Maritime Power (AMP) infrastructure, installing up to
34 ten new wharf cranes, and expanding the WBICTF on-dock railyard and adding up to
35 seven electrically powered, rail-mounted gantry cranes for train loading/unloading. The
36 dredged material would be disposed of at an approved site, assumed to be a combination
37 of the LA-2 ocean disposal site and an approved upland disposal location. Construction
38 of the Proposed Project is conservatively assumed to start in 2026 and end in 2027. This
39 assumption is conservative because construction starting later would involve equipment
40 with lower GHG emissions.

41 **Impact GHG-1: Would the Proposed Project generate GHG 42 emissions, either directly or indirectly, that would exceed the 43 SCAQMD 10,000 mty CO₂e threshold?**

44 Table 3.6-2 presents amortized annual GHG emissions associated with construction of
45 the Proposed Project. Construction emissions were determined by adding direct and
46 indirect GHG emissions associated with all construction elements and amortizing over

1 the assumed life of the Proposed Project (37 years). Table 3.6-3 shows amortized annual
 2 GHG emissions associated with construction, annual GHG emissions associated with
 3 operational activities, and significance determinations.

Table 3.6-2: Construction GHG Emissions Prior to Mitigation – Proposed Project (mty)

Source Category	CO ₂ e
Construction Year 2026	
Off-road Construction Equipment Exhaust	3,398
Marine Source Exhaust	0
Harbor Craft	1,232
On-road Construction-Related Vehicles	4,399
Worker Vehicles	16
Total Construction Year 2026	9,044
Construction Year 2027	
Off-road Construction Equipment Exhaust	184
Marine Source Exhaust	123
Harbor Craft	2
On-road Construction-Related Vehicles	112
Worker Vehicles	21
Total Construction Year 2027	442
Amortized Construction	256

Notes:

- [1] On-road construction vehicle emissions include exhaust emissions from haul trucks and material delivery trucks.
 [2] Worker Vehicle emissions include exhaust emissions from construction worker commute.
 [3] Emissions might not add precisely due to rounding.
 [4] Amortized construction emissions are calculated as the sum of emissions from entire construction period divided by the life of the Project. For this analysis, life of the project is assumed to be 37 years, counting from 2026 through end of 2062.

4

Table 3.6-3: Unmitigated Construction and Operational GHG Emissions – prior to Mitigation* – Proposed Project (mty)

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Amortized Construction				256
Year - 2026				
OGV - Transit and Anchoring	21,985	< 1	1	22,302
OGV – Hoteling	1,158	< 1	< 1	1,181
Harbor Craft	183	< 1	< 1	183
CHE	4,730	< 1	< 1	4,738
Rail On-Site	198	< 1	< 1	200
Rail Off-Site	3,414	< 1	< 1	3,447
On-Site Trucks	1,030	< 1	< 1	1,081

Table 3.6-3: Unmitigated Construction and Operational GHG Emissions – prior to Mitigation* – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
Off-Site Trucks	9,362	< 1	1	9,777
Employee Commute On-Site	35	< 1	< 1	35
Employee Commute Off-Site	1,013	< 1	< 1	1,018
Backlands Electricity Consumption				1,004
AMP Electricity Consumption				379
Total Operations 2026	43,108	1	3	45,345
Proposed Project Total Emissions with Amortized Construction 2026				45,601
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 31,935
Significance Threshold				10,000
Significant?				No
NEPA Disclosure				
Proposed Project				45,601
No Federal Action Alternative Emissions	72,252	2	5	75,634
Year - 2027				
OGV - Transit and Anchoring	22,028	< 1	1	22,346
OGV – Hoteling	1,194	< 1	< 1	1,217
Harbor Craft	190	< 1	< 1	190
CHE	4,872	< 1	< 1	4,880
Rail On-Site	196	< 1	< 1	198
Rail Off-Site	3,479	< 1	< 1	3,513
On-Site Trucks	1,069	< 1	< 1	1,122
Off-Site Trucks	9,762	< 1	2	10,195
Employee Commute On-Site	35	< 1	< 1	36
Employee Commute Off-Site	1,017	< 1	< 1	1,022
Backlands Electricity Consumption				1,179
AMP Electricity Consumption				391
Total Operations 2027	43,843	1	3	46,288
Proposed Project Total Emissions with Amortized Construction 2027				46,544
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 30,992
Significance Threshold				10,000
Significant?				No
NEPA Disclosure				
Proposed Project				46,544

Table 3.6-3: Unmitigated Construction and Operational GHG Emissions – prior to Mitigation* – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
No Federal Action Alternative Emissions	73,185	2	5	76,798
Year 2028				
OGV - Transit and Anchoring	35,279	< 1	2	35,794
OGV – Hoteling	2,249	< 1	< 1	2,294
Harbor Craft	230	< 1	< 1	231
CHE	15,768	< 1	< 1	15,792
Rail On-Site	755	< 1	< 1	762
Rail Off-Site	10,221	< 1	< 1	10,320
On-Site Trucks	3,508	< 1	< 1	3,682
Off-Site Trucks	32,154	< 1	5	33,581
Employee Commute On-Site	97	< 1	< 1	97
Employee Commute Off-Site	2,771	< 1	< 1	2,783
Backlands Electricity Consumption				3,295
AMP Electricity Consumption				689
Total Operations 2028	103,032	4	8	109,320
Proposed Project Total Emissions with Amortized Construction 2028				109,576
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				32,039
Significance Threshold				10,000
Significant?				Yes
NEPA Disclosure				
Proposed Project				109,576
No Federal Action Alternative Emissions	73,642	2	5	77,452
Year 2036				
OGV - Transit and Anchoring	47,788	< 1	2	48,480
OGV – Hoteling	3,352	< 1	< 1	3,419
Harbor Craft	321	< 1	< 1	322
CHE	21,399	< 1	< 1	21,432
Rail On-Site	1,841	< 1	< 1	1,859
Rail Off-Site	17,053	1	< 1	17,218
On-Site Trucks	4,028	< 1	< 1	4,230
Off-Site Trucks	37,457	1	6	39,123
Employee Commute On-Site	140	< 1	< 1	141
Employee Commute Off-Site	1,028	< 1	< 1	1,032
Backlands Electricity Consumption				4,488
AMP Electricity Consumption				1,276

Table 3.6-3: Unmitigated Construction and Operational GHG Emissions – prior to Mitigation* – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
Total Operations 2036	134,409	5	10	143,019
Proposed Project Total Emissions with Amortized Construction 2036				143,275
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				65,739
Significance Threshold				10,000
Significant?				Yes
NEPA Disclosure				
Proposed Project				143,275
No Federal Action Alternative Emissions	76,604	3	5	81,393
Year 2050				
OGV - Transit and Anchoring	59,167	1	3	60,023
OGV – Hoteling	4,150	< 1	< 1	4,233
Harbor Craft	398	< 1	< 1	398
CHE	32,786	< 1	< 1	32,838
Rail On-Site	2,920	< 1	< 1	2,949
Rail Off-Site	22,541	2	< 1	22,759
On-Site Trucks	5,053	1	< 1	5,313
Off-Site Trucks	52,406	2	8	54,744
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,533	< 1	< 1	1,539
Backlands Electricity Consumption				6,828
AMP Electricity Consumption				1,276
Total Operations 2050	181,161	7	13	193,105
Proposed Project Total Emissions with Amortized Construction 2050				193,361
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				115,824
Significance Threshold				10,000
Significant?				Yes
NEPA Disclosure				
Proposed Project				193,361
No Federal Action Alternative Emissions	109,372	4	8	116,504
Year 2055				
OGV - Transit and Anchoring	59,167	1	3	60,023
OGV – Hoteling	4,150	< 1	< 1	4,233

Table 3.6-3: Unmitigated Construction and Operational GHG Emissions – prior to Mitigation* – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
Harbor Craft	398	< 1	< 1	398
CHE	32,786	< 1	< 1	32,838
Rail On-Site	2,920	< 1	< 1	2,949
Rail Off-Site	22,541	2	< 1	22,759
On-Site Trucks	5,053	1	< 1	5,313
Off-Site Trucks	52,406	2	8	54,744
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,533	< 1	< 1	1,539
Backlands Electricity Consumption				6,828
AMP Electricity Consumption				1,276
Total Operations 2055	181,161	7	13	193,105
Proposed Project Total Emissions with Amortized Construction 2055				193,361
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				115,824
Significance Threshold				10,000
Significant?				Yes
NEPA Disclosure				
Proposed Project				193,361
No Federal Action Alternative Emissions	120,372	4	8	128,614
Year 2062				
OGV - Transit and Anchoring	59,167	1	3	60,023
OGV – Hoteling	4,150	< 1	< 1	4,233
Harbor Craft	398	< 1	< 1	398
CHE	32,786	< 1	< 1	32,838
Rail On-Site	2,920	< 1	< 1	2,949
Rail Off-Site	22,541	2	< 1	22,759
On-Site Trucks	5,053	1	< 1	5,313
Off-Site Trucks	52,406	2	8	54,744
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,533	< 1	< 1	1,539
Backlands Electricity Consumption				6,828
AMP Electricity Consumption				1,276
Total Operations 2062	181,161	6	11	193,105
Proposed Project Total Emissions with Amortized Construction 2062				193,361
CEQA Impacts				

Table 3.6-3: Unmitigated Construction and Operational GHG Emissions – prior to Mitigation* – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				115,824
Significance Threshold				10,000
Significant?				Yes
NEPA Disclosure				
Proposed Project				193,361
No Federal Action Alternative Emissions	137,882	5	10	147,726

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CEQA Impact Determination

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Table 3.6-3 shows that the Proposed Project’s operational GHG emissions minus the CEQA baseline would exceed the GHG threshold of 10,000 mty in 2028, 2036, 2050, 2055, and 2062. Total emissions would increase from 2026 through 2050 because of increased terminal throughput and would not increase thereafter. Impacts of the Proposed Project’s operational GHG emissions would be significant under CEQA in all analysis years prior to mitigation.

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Mitigation Measures

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Mitigation measures MM AQ-2 through MM AQ-6, MM AQ-8 and MM AQ-10, and lease measures LM AQ-1 and LM AQ-2 applied to the air quality impacts in Section 3.2, Air Quality and Meteorology, would also reduce GHG emissions from construction and operation (the full text of those measures is provided in Section 3.2.5 and in Table 3.6-13). The other air quality mitigation measures in Section 3.2 are either proposed to reduce criteria pollutants and/or diesel particulate matter (DPM) and would not have a substantial impact on GHG emissions or could not be reasonably quantified.

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In addition to the air quality mitigation measures, mitigation measures MM GHG-1 and MM GHG-2, directed at GHG emissions reduction specifically, are applied and would reduce GHG emissions during Proposed Project operation:

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MM GHG-1: LED Lighting. All lighting within the interior of buildings on the premises and outdoor high mast terminal lighting will be replaced with LED lighting or a technology with similar energy-saving capabilities by the first year after completion of construction of the Proposed Project or Alternative.

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With implementation of this measure, twenty-four 100-foot and seventeen 60-foot, high-mast light poles would be converted to LED lighting by the first year after completion of construction of the Proposed Project or Alternative 2. The effects on electricity-consumption of converting high mast light poles to LED GHG emissions are quantified; the effects of converting interior lighting to LED are not quantified but the benefits are qualitatively discussed in the analysis.

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MM GHG-2. GHG Reduction Offsets. The Tenant and/or LAHD shall be required to purchase and retire carbon offsets related to activities that reduce, avoid, destroy, or sequester an amount of GHG emissions in an off-site location to offset the

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1 equivalent amount of GHG emissions generated by the Project in excess of the
2 LAHD's significance threshold of 10,000 metric tons. From the first year of the
3 Permit through the end of the term of the Permit, the Tenant and/or LAHD shall
4 purchase and retire carbon offsets each year in an amount that would be the
5 equivalent of the Project's estimated residual GHG emissions. The estimated
6 residual emissions for each calendar year shall be based upon the calculations in
7 Appendix C of the Final EIS/EIR prepared for the Proposed Project except as
8 adjusted in accordance with paragraph a) or b), below.

9 The LAHD is in the process of developing a Greenhouse Gas Program. The Program
10 shall be used for GHG-reducing projects and programs approved by the Port of Los
11 Angeles. If that Program is established during the term of the Permit, the Tenant
12 shall have the option to offset the required amount of GHG emissions through a
13 funding contribution to the Greenhouse Gas Program rather than towards purchasing
14 carbon offsets from a CARB-recognized registry.

15 While the LAHD Greenhouse Gas Program is currently under development, the
16 Tenant and/or LAHD shall purchase and retire carbon offsets from a CARB-
17 recognized offset registry as follows:

18 **Carbon offsets:** The Tenant and/or LAHD shall purchase and retire carbon offsets
19 from a CARB-recognized registry to ensure that offsets will result in real,
20 permanent, additional, quantifiable, verifiable, and enforceable reductions. The
21 carbon offsets shall be verifiable and enforceable in accordance with the registry's
22 applicable standards, practices, or protocols.

23 The order of priority for purchasing (any one or more) carbon offsets shall be
24 considered as follows:

- 25 i. Originating within the local area;
- 26 ii. Originating within the South Coast Air Basin;
- 27 iii. Originating within the state of California; or
- 28 iv. If sufficient local and in-state offsets are not available, conforming national
29 offsets registered with a CARB-recognized registry.

30 **Adjustment of Project's Required Offsets through Other Verified GHG**
31 **Emission Reductions:** The Tenant and/or LAHD may pursue the following
32 modifications to the Project's total estimated GHG emissions identified in this
33 measure. These modifications may be pursued in conjunction with or independent of
34 each other on an up to annual basis.

35 a. *Adjustment in GHG Emissions*

36 In the event of changes in activities, efficiency, reduced operations, regulations, or
37 for any other purpose, an adjustment of the required carbon offsets may be
38 requested based on an evaluation of actual GHG emissions rather than future
39 projected GHG emission calculations in this EIR. If the actual GHG emissions,
40 minus the CEQA Baseline, do not exceed the significance threshold of 10,000 mty,
41 no carbon offsets shall be required. To adjust the required number of carbon offsets
42 for purchase, the Tenant shall make a request in writing to the LAHD for review and
43 approval for the calendar year under consideration and shall submit a report within
44 60 days that quantifies the actual greenhouse gas emissions by an expert or an
45 independent, qualified third-party. The evaluation of actual greenhouse gas
46 emissions must be performed using acceptable industry standards and protocols for
47 all sources that were included in the Project's GHG emissions calculations under

1 Impact GHG-1. LAHD review shall occur within 30 days of receipt of the submitted
 2 report. Any expenses incurred by LAHD in processing the Tenant's request,
 3 including retaining an independent third-party verifier to peer review the report,
 4 shall be borne by the Tenant. Alternatively, LAHD may implement a review for its
 5 own purpose, subject to the same quantification process described above, to adjust
 6 GHG emissions at any time during the life of the Project.

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8 *b) Implementation of Additional GHG Reduction Methods*

9 In addition, the Tenant may request a reevaluation of required carbon offsets to be
 10 purchased according to this paragraph. The Tenant may implement different and
 11 additional GHG reduction methods if new technology and/or other feasible measures
 12 become available during the term of the Permit. To adjust the Tenant's required
 13 number of carbon offsets for purchase, the Tenant shall identify such additional
 14 GHG reduction actions and must quantify the GHG emission reductions from these
 15 GHG reduction actions by an independent, qualified third-party verifier. Once the
 16 GHG reduction actions are found to be feasible and are reviewed and approved by
 17 LAHD staff, the Tenant may request that LAHD reduce its required purchase of
 18 carbon offsets by the equivalent amount of demonstrated reduction. Any expenses
 19 incurred by LAHD in processing the Tenant's request, including retaining a third-
 20 party verifier, shall be borne by the Tenant.

21 Emissions after the application of the air quality mitigation measures and MM GHG-1
 22 are shown in Table 3.6-5. Proposed Project GHG emissions would remain significant
 23 under CEQA in 2028, 2036, 2050, 2055, and 2062 analysis years.

Table 3.6-4: Construction GHG Emissions with Mitigation – Proposed Project (mty)

Source Category	CO ₂ e
Construction Year 2026	
Off-road Construction Equipment Exhaust	1,326
Marine Source Exhaust	0
Harbor Craft	1,232
On-road Construction-Related Vehicles	48
Worker Vehicles	7
Total Construction Year 2026	2,613
Construction Year 2027	
Off-road Construction Equipment Exhaust	186
Marine Source Exhaust	37
Harbor Craft	<1
On-road Construction-Related Vehicles	7
Worker Vehicles	<1
Total Construction Year 2027	231
Amortized Mitigated Construction	77

Notes:

Table 3.6-4: Construction GHG Emissions with Mitigation – Proposed Project (mty)

Source Category	CO ₂ e
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[1] Construction emissions reflect the construction activities for the Proposed Project, which consist broadly of rebuilding of wharf at Berth 126-129 and expansion of intermodal railyard at WBICTF.

[2] On-road construction vehicle emissions include exhaust emissions from haul trucks and material delivery trucks.

[3] Worker Vehicle emissions include exhaust emissions from construction worker commute.

[4] Construction emissions "with mitigation" are controlled based on the mitigation measures MM AQ-1 through MM-AQ-6 presented in this document.

[5] Emissions might not add precisely due to rounding.

[6] Amortized construction emissions are calculated as the sum of emissions from entire construction period, 2026 and 2027 in this case, divided by the life of the Project. For this analysis, life of the project is assumed to be 37 years, counting from 2026 through end of 2062.

[7] Emissions associated with construction of electrical charging infrastructure are captured in year 2036.

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Table 3.6-5: Construction and Operational GHG Emissions with Mitigation – Proposed Project (mty)

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Amortized Construction of Proposed Project				77
Year - 2026				
OGV - Transit and Anchoring	21,567	< 1	< 1	21,733
OGV – Hoteling	1,158	< 1	< 1	1,181
Harbor Craft	183	< 1	< 1	183
CHE	4,730	< 1	< 1	4,738
Rail On-Site	198	< 1	< 1	200
Rail Off-Site	3,414	< 1	< 1	3,447
On-Site Trucks	1,030	< 1	< 1	1,081
Off-Site Trucks	9,362	< 1	1	9,777
Employee Commute On-Site	35	< 1	< 1	35
Employee Commute Off-Site	1,013	< 1	< 1	1,018
Backlands Electricity Consumption				1,004
AMP Electricity Consumption				379
Total Operations 2026	42,691	1	2	44,776
Total Operations with Proposed Project Amortized Construction 2026				44,853
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 32,684
Significance Threshold				10,000
Significant?				No
Year - 2027				
OGV - Transit and Anchoring	21,606	< 1	< 1	21,772
OGV – Hoteling	1,194	< 1	< 1	1,217
Harbor Craft	190	< 1	< 1	190

Table 3.6-5: Construction and Operational GHG Emissions with Mitigation – Proposed Project (mt)

Source Category	CO2	CH4	N2O	CO2e
CHE	4,872	< 1	< 1	4,880
Rail On-Site	196	< 1	< 1	198
Rail Off-Site	3,479	< 1	< 1	3,513
On-Site Trucks	1,069	< 1	< 1	1,122
Off-Site Trucks	9,762	< 1	2	10,195
Employee Commute On-Site	35	< 1	< 1	36
Employee Commute Off-Site	1,017	< 1	< 1	1,022
Backlands Electricity Consumption				1,179
AMP Electricity Consumption				391
Total Operations 2027	43,421	1	3	45,715
Total Operations with Proposed Project Amortized Construction 2027				45,791
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 31745
Significance Threshold				10,000
Significant?				No
Year 2028				
OGV - Transit and Anchoring	34,624	< 1	< 1	34,885
OGV – Hoteling	2,249	< 1	< 1	2,294
Harbor Craft	230	< 1	< 1	231
CHE	12,526	7	< 1	12,833
Rail On-Site	755	< 1	< 1	762
Rail Off-Site	10,221	< 1	< 1	10,320
On-Site Trucks	3,508	< 1	< 1	3,682
Off-Site Trucks	32,154	< 1	5	33,581
Employee Commute On-Site	97	< 1	< 1	97
Employee Commute Off-Site	2,771	< 1	< 1	2,783
Backlands Electricity Consumption				3,536
AMP Electricity Consumption				689
Total Operations 2028	99,136	11	7	105,693
Total Amortized Construction and Operations Emissions 2028				105,770
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				28,233
Significance Threshold				10,000
Significant?				Yes
Year 2036				
OGV - Transit and Anchoring	46,885	< 1	1	47,243
OGV – Hoteling	3,352	< 1	< 1	3,419

Table 3.6-5: Construction and Operational GHG Emissions with Mitigation – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
Harbor Craft	321	< 1	< 1	322
CHE	1,585	< 1	< 1	1,591
Rail On-Site	1,841	< 1	< 1	1,859
Rail Off-Site	17,053	1	< 1	17,218
On-Site Trucks	4,028	< 1	< 1	4,230
Off-Site Trucks	37,457	1	6	39,123
Employee Commute On-Site	140	< 1	< 1	141
Employee Commute Off-Site	1,028	< 1	< 1	1,032
Backlands Electricity Consumption				12,398
AMP Electricity Consumption				1,276
Total Operations 2036	113,691	5	9	129,851
Total Amortized Construction and Operations Emissions 2036				129,928
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				52,391
Significance Threshold				10,000
Significant?				Yes
Year 2050				
OGV - Transit and Anchoring	58,048	1	2	58,491
OGV – Hoteling	4,150	< 1	< 1	4,233
Harbor Craft	398	< 1	< 1	398
CHE	2,294	< 1	< 1	2,302
Rail On-Site	2,920	< 1	< 1	2,949
Rail Off-Site	22,541	2	< 1	22,759
On-Site Trucks	5,053	1	< 1	5,313
Off-Site Trucks	52,406	2	8	54,744
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,533	< 1	< 1	1,539
Backlands Electricity Consumption	0	0	0	18,948
AMP Electricity Consumption	0	0	0	1,276
Total Operations 2050	149,550	6	10	173,157
Total Amortized Construction and Operations Emissions 2050				173,234
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				95,697
Significance Threshold				10,000
Significant?				Yes
Year 2055				

Table 3.6-5: Construction and Operational GHG Emissions with Mitigation – Proposed Project (mt)

Source Category	CO2	CH4	N2O	CO2e
OGV - Transit and Anchoring	58,048	1	2	58,491
OGV – Hoteling	4,150	< 1	< 1	4,233
Harbor Craft	398	< 1	< 1	398
CHE	2,294	< 1	< 1	2,302
Rail On-Site	2,920	< 1	< 1	2,949
Rail Off-Site	22,541	2	< 1	22,759
On-Site Trucks	5,053	1	< 1	5,313
Off-Site Trucks	52,406	2	8	54,744
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,533	< 1	< 1	1,539
Backlands Electricity Consumption				18,948
AMP Electricity Consumption				1,276
Total Operations 2055	149,550	7	12	173,157
Total Amortized Construction and Operations Emissions 2055				173,234
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				95,697
Significance Threshold				10,000
Significant?				Yes
Year 2062				
OGV - Transit and Anchoring	58,048	1	2	58,491
OGV – Hoteling	4,150	< 1	< 1	4,233
Harbor Craft	398	< 1	< 1	398
CHE	2,294	< 1	< 1	2,302
Rail On-Site	2,920	< 1	< 1	2,949
Rail Off-Site	22,541	2	< 1	22,759
On-Site Trucks	5,053	1	< 1	5,313
Off-Site Trucks	52,406	2	8	54,744
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,533	< 1	< 1	1,539
Backlands Electricity Consumption	0	0	0	18,948
AMP Electricity Consumption	0	0	0	1,276
Total Operations 2062	149,550	7	12	173,157
Total Amortized Construction and Operations Emissions 2062				173,234
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				95,697
Significance Threshold				10,000

Table 3.6-5: Construction and Operational GHG Emissions with Mitigation – Proposed Project (mty)

Source Category	CO2	CH4	N2O	CO2e
Significant?				Yes

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Notes:

- 1) Emissions assume the simultaneous occurrence of peak daily equipment activity levels. Such levels would rarely occur during day-to-day terminal operations.
- 2) Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.
- 3) Operational emissions “with mitigation” are controlled based on operational emissions mitigation measures MM AQ-8, MM AQ-9, MM AQ-10 presented in this document
- 4) Emissions might not precisely add due to rounding.
- 5) Emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been integrated with the 2036 operational year emissions of the cargo-handling equipment.

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Residual Impacts

Impacts of the Proposed Project would be reduced by the application of the mitigation measures. In particular, with application of MM GHG-2 GHG Offset Credits, residual impacts would be less than significant under CEQA.

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Informational Assessment: Would the Proposed Project be consistent with certain statewide, regional and local plans and policies?

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The State of California, the City of Los Angeles, and LAHD have adopted plans and policies to reduce GHG emissions. None of these plans or policies constitutes regulations or requirements adopted to implement a statewide, regional or local plan for reduction or mitigation of greenhouse gas emissions (see *Center for Biological Diversity v. Cal. Dept. of Fish and Wildlife (Newhall Ranch)* (2015) 62 Cal.4th 204, 223.) Therefore, a significance determination cannot be made using these factors.

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Nevertheless, for informational purposes, this document provides a discussion of consistency with adopted statewide, regional and local plans and policies to reduce GHG emissions. A description of the various State of California, City of Los Angeles, and Port of Los Angeles programs related to GHG reductions is provided in Section 3.6.4. Several of those programs have established legislative and municipal targets for reducing GHG emissions below 1990 levels. Key examples include:

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- Senate Bill 32 (SB32)/Assembly Bill 32 (AB 32) - 1990 levels by 2020, 80 percent below 1990 levels by 2050;
- City of Los Angeles Sustainable City pLAn -- 45 percent below 1990 levels by 2025, 60 percent below 1990 levels by 2035, 80 percent below 1990 levels by 2050;
- CARB Scoping Plan – directs agencies to implement all feasible mitigation, including, where necessary, purchase of offset credits.

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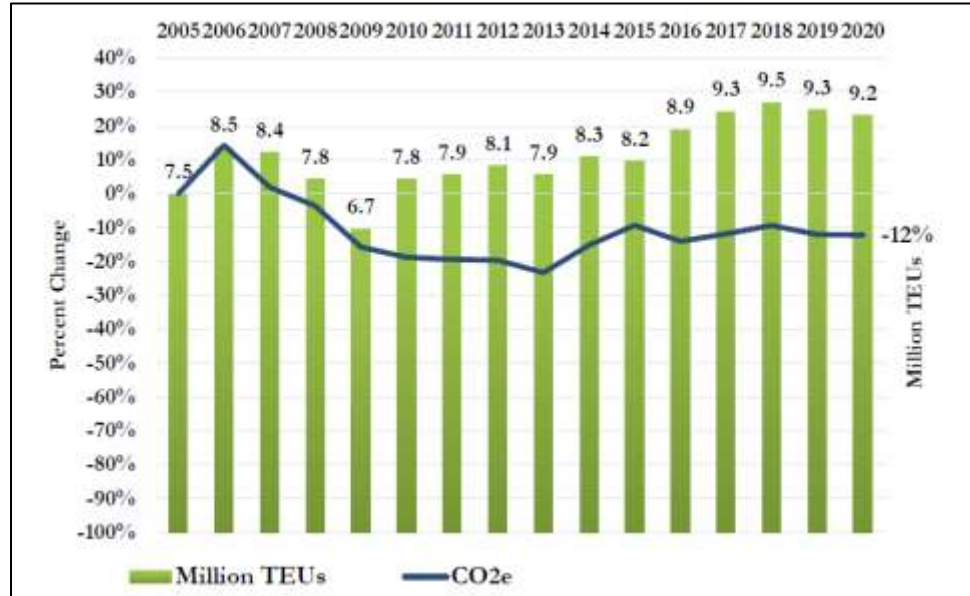
LAHD has been tracking GHG emissions, in terms of carbon dioxide equivalents (CO₂e) since 2005 through the LAHD municipal GHG inventory and the Port’s annual inventory of air emissions. As illustrated in Figure 3.5-1, significant reductions in Port-related GHG emissions have occurred since 2005 despite increased cargo volumes (LAHD 2021).

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In the case of the Proposed Project, emissions per unit of cargo (i.e., per TEU), even

1 without the mitigation measures proposed in this EIS/EIR, would decrease over time
 2 (Table 3.6-68). The decrease would be the result of increased efficiency of cargo
 3 handling equipment, increased vessel sizes, and the increased electrification of cargo
 4 handling operations.

5 **Figure 3.6-1: Port-wide GHG Emissions 2005-2020**



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 7 Source: Figure 9.1 Port 2020 Emissions Inventory (LAHD 2021)

Table 3.6-6: Greenhouse Gas Emissions for Project and Alternatives per Unit of Cargo

Annual CO2e emissions per TEU (metric tons)				
Year	Baseline	Project	No Project	No Federal Action
2019	0.402			
2027		0.241	0.307	0.310
2036		0.212	0.250	0.253
2045		0.207	0.244	0.243

8
 9 Table 3.6-7 summarizes the Proposed Project’s consistency with plans and policies
 10 adopted for the purpose of reducing GHG emissions:

Table 3.6-7: Consideration of Key State and Local GHG-Reducing Plans and Policies

Plan or Policy	Scope	Evaluation
SB32/AB 32– California Global Warming Solutions Act (2006).	Established State-wide goals that are not directly binding on local agencies conducting project-level analysis.	AB 32 codified EO S-3-05 targets through 2020 and directed State regulatory agencies to develop rules and regulations to meet the 2020 State targets. To date, no such rules and regulations have been promulgated that would be binding on the Revised Project.

Table 3.6-7: Consideration of Key State and Local GHG-Reducing Plans and Policies

Plan or Policy	Scope	Evaluation
		<p>The Proposed Project analysis has quantified GHG impacts for 2026 through 2045 and has identified feasible mitigation measures.</p> <p>AB 32 did not identify project-level measures. The Proposed Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities.</p> <p>Although the Proposed Project would exceed the SCAQMD significance threshold under GHG-1, mitigation in the form of carbon offset purchases under MM GHG-2 would reduce the impact to less than significant. Accordingly, it was determined that the Proposed Project would be consistent with the State's compliance with AB 32.</p>
<p><i>CARB Scoping Plan (2008)</i></p>	<p>The Scoping Plan includes general recommendations to reduce GHG emissions from various sources. The most relevant to the proposed Project are the Goods Movement Recommendations, which are generally suited to the proposed Project, although they are not legally binding on local agencies conducting project-level analysis.</p>	<p>AB 32 Scoping Plan describes the State's approach to achieve the GHG emissions reduction goal to 1990 levels by 2020. The Scoping Plan's GHG reduction actions include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. The Scoping Plan's reduction actions do not identify specific project-level measures.</p> <p>The Scoping Plan identified a discrete early action, regulation for port operations. This action resulted in the promulgation of regulation for electrification of ship auxiliary engines while at berth. The Revised Project complies with this requirement and goes beyond in requiring a higher percentage of vessel calls (quantified at 97% in this analysis) to use shoreside power than the regulation requires.</p> <p>The Proposed Project analysis has quantified GHG impacts and has identified feasible mitigation measures. The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities, developed as part of the Scoping Plan. Although the Proposed Project GHG emissions are expected to exceed 10,000 MT per year for every study year, mitigation in the form of carbon offset purchases under MM GHG-1 would reduce the impact to less than significant. Accordingly, it was determined that the Proposed Project would be consistent with the State's GHG reduction goals under AB 32 and would therefore be consistent with the AB 32 Scoping Plan (2008)</p>

Table 3.6-7: Consideration of Key State and Local GHG-Reducing Plans and Policies

Plan or Policy	Scope	Evaluation
<p><i>AB 32 Climate Change Scoping Plan Update (2022)</i> outlines a sector-by-sector roadmap for California to achieve carbon neutrality by 2045 or earlier. It aims to reduce anthropogenic emissions to 85% below 1990 levels by 2045.</p>	<p>The Scoping Plan includes general recommendations to reduce GHG emissions from various sources, some of which are relevant to the Revised Project.</p>	<p>The Scoping Plan Update includes specific recommended actions for lead agencies, identifies possible regulatory actions for vehicles and fuels, and introduces the need for a sustainable freight initiative. The Scoping Plan Update identifies key technology-specific objectives for the freight/transportation sector but does not identify specific direct project-level measures. The Proposed Project analysis has quantified GHG impacts and has identified feasible mitigation measures that would reduce the impact to less than significant. The Proposed Project would help to implement the objective in the Scoping Plan Update of reducing GHGs and criteria pollutants from ocean-going vessels. The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities, developed as part of the Scoping Plan Update. Accordingly, the Proposed Project would be consistent with the State’s implementation of the AB 32 Scoping Plan Update.</p>
<p>Sustainable Freight Action Plan EO B-32-15</p>	<p>The plan’s objectives are to reduce emissions in the freight sector and improve efficiency and reduce pollution of the freight transport system to meet 2030 targets.</p>	<p>The California Freight Action Plan was developed in conjunction with several state agencies and includes the following recommendations:</p> <ul style="list-style-type: none"> • A long-term 2050 Vision and Guiding Principles for California’s future freight transport system. • Targets for 2030 to guide the State toward meeting the Vision to improve freight efficiency, transition to zero emission technologies, and increase the competitiveness of California’s freight transport system. • Opportunities to leverage State freight transport system investments. • Actions to initiate over the next five years to make progress towards the Targets and the Vision. • Pilot projects to achieve on-the-ground progress in the near-term. • Additional concepts for further exploration and development, if viable. <p>There is no finding of consistency appropriate for the Proposed Project because these are targets and future goals for State agencies to measure and report progress on. The targets are not mandates,</p>

Table 3.6-7: Consideration of Key State and Local GHG-Reducing Plans and Policies

Plan or Policy	Scope	Evaluation
		but rather aspirational measures of progress, and the Proposed Project includes mitigation and lease measures for the transition to zero emissions equipment.
SB 32 (2016) codified the EO B-30-15 target: 40 percent reduction below 1990 levels by 2030.	Established State-wide goals that are not directly binding on local agencies conducting project-level analysis.	SB 32 codified EO B-30-15 target through 2030 and directed State regulatory agencies to develop rules and regulations to meet the 2030 State target but did not identify project-level measures. The Proposed Project analysis has quantified GHG impacts for 2030 and has identified feasible mitigation measures in the form of carbon offset purchases under MM GHG-1 that would reduce the impact to less than significant. Accordingly, the Proposed Project would be consistent with the State's GHG reduction goals under EO B-30-15 and would therefore be consistent with SB 32 which codifies EO B-30-15.
The Sustainable City pLAN/Green New Deal)	Not directly applicable to project-level analysis, but certain elements of the Revised Project serve to forward the goals.	The pLAN contains strategies to address current and future climate change impacts and reduce air quality emissions. The pLAN sets aspirations for 14 target areas. Of these, the following are applicable to port activities: energy-efficient buildings, carbon and climate leadership, reduction of Port GHG emissions by 80% by 20250, implementing ZE drayage trucks in the Clean Truck Program. The Proposed Project would further these goals and aspirations, but because these are future targets that are not defined clearly, it is not possible to demonstrate consistency at this time.
San Pedro Bay Ports Clean Air Action Plan (2007) and Updates (2010, 2017)	GHG reductions are considered as co-benefits of CAAP measures.	Although the CAAP and Update are primarily designed to reduce criteria pollutants and air toxics, the following strategies also reduce GHG emissions: OGV1: Vessel Speed Reduction (VSR) Program OGV2: Reduction of At-Berth OGV Emissions HC1: Performance Standards for Harbor Craft. Of these measures, OGV1 is applicable to the Revised Project through mitigation measure MM AQ-10. Mitigation measure MM AQ-9 addresses CAAP measure OGV2; CAAP measure HC1 is a port-wide measure. In addition, the CAAP 2017 Update established a goal of implementing zero-emissions technology in Port terminals by 2035. The Proposed Project is therefore consistent with the CAAP and CAAP Updates.
Port of Los Angeles "Actions to Reduce Greenhouse Gas Emissions by 2050" (Submitted	Not applicable to project-level analysis, but certain elements of the Proposed Project	The document outlines actions/strategies that are either being implemented or evaluated to continue the reduction of GHG emissions and meet a target of 35 percent below 1990 levels by 2035 and 80 percent below 1990 levels by 2050. Table 3 of the document lists GHG emissions reduction strategies

Table 3.6-7: Consideration of Key State and Local GHG-Reducing Plans and Policies

Plan or Policy	Scope	Evaluation
<i>to City of Los Angeles, 2014)</i>	serve to forward the goals.	for Port operations as well as the applicable implementing programs. The document does not identify new programs or measures; it lists existing initiatives and reiterates the Port’s commitment to continued collaboration with the international maritime community, as well as between all stakeholders and regulators. The Proposed Project would further the goals outlined in the report through feasible mitigation measures in the form of carbon offset purchases under MM GHG-2 that would reduce GHG impacts to less than significant. These GHG reductions are analyzed at the project-level but nevertheless will help support because these are future targets that are analyzed through the Port’s annual Emissions Inventories. Accordingly, the Proposed Project is considered to be consistent with the programs and goals presented in the report.

1 The Proposed Project would not be inconsistent with certain state and local plans and
 2 policies, as identified in Table 3.6-7.

3 **Sea Level Rise**

4 As described in Section 3.6.5.1, both the State of California and the Port of Los Angeles
 5 have studied the potential effects of sea-level rise (SLR) resulting from climate change.
 6 The Port’s study focused on individual facilities within the Port of Los Angeles and is
 7 therefore more appropriate than the state’s more general consideration of coast-wide
 8 SLR.

9 The State’s study for the low-risk aversion level, high-emissions scenario (i.e., greatest
 10 SLR) at the Los Angeles tide gauge predicts SLR of approximately 12 inches (1.0 ft)
 11 higher than the 2000 level by 2050 and 38 inches (3.2 ft) by 2100 (see OPC [2018]
 12 Appendix 3 Table 28). That prediction is based on the 66% probability for SLR, but a
 13 less likely outcome (the 1-in-200 chance) predicts SLR in 2050 of 22 inches (1.8 ft). The
 14 Port’s study projects that under the high-emissions scenario, sea level at the Port could
 15 rise 24 inches above the 2000 level by 2050, and between 37 inches (the mid-point
 16 estimate) to as much as 66 inches (the high scenario) above the 2000 level by 2100.

17 Under the 24-inch estimate of SLR for 2050, the Port’s study concludes that SLR alone
 18 at normal high tide would not cause permanent inundation or shoreline overtopping and
 19 therefore would not threaten the facilities at the Project site during their projected
 20 service life. Even allowing for a 2.6-foot 100-year storm tide and 37 inches of SLR (the
 21 2100 scenario), no inundation of the Berths 121-131 Terminal would occur.

22 Accordingly, SLR does not pose substantial structural risks to the Proposed Project and
 23 no compensatory structural revisions are needed. It is possible that vessel operational
 24 procedures may, at some point in the future, need to be revised to accommodate higher
 25 mean water levels at the berth, but that is speculative at this time.

Alternative 1 – No Project

Alternative 1 is a CEQA-only alternative. The No Project Alternative is not evaluated under NEPA because NEPA requires an evaluation of the No Federal Action Alternative (see Section 2.9.1.2).

Under Alternative 1, none of the proposed construction activities would occur in water or in water-side or backland areas. No new cranes would be added, no dredging or wharf construction would occur, the WBICTF on-dock rail yard would not be expanded, and no backland modifications would occur. Under the No Project Alternative, the existing B121-131 Terminal would continue to operate as an approximately 186-acre container terminal. Based on the throughput projections for the Port, the B121-B131 Terminal would be expected to operate at its capacity of approximately 1,332,000 TEUs in 2062. Any future legally enacted Port-wide environmental program, such as a tariff change to support the CAAP measure, 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. In addition, any adopted rules or regulations, such as from SCAQMD or other regulatory agencies, would be applied to the No Project Alternative.

Impact GHG-1: Would Alternative 1 generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO₂e threshold?

Table 3.6-8 presents annual GHG emissions associated with operational activities of Alternative 1. Because Alternative 1 is the No Project Alternative, there is no construction associated with Alternative 1.

Table 3.6-8: Annual Operational Emissions—Alternative 1, No Project (mty)

Source Category	Daily Emissions (lb/day)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Year 2026				
OGV - Transit and Anchoring	36,842	< 1	2	37,374
OGV – Hoteling	1,876	< 1	< 1	1,913
Harbor Craft	301	< 1	< 1	301
CHE	7,792	< 1	< 1	7,804
Rail On-Site	366	< 1	< 1	369
Rail Off-Site	5,460	< 1	< 1	5,513
On-Site Trucks	1,763	< 1	< 1	1,851
Off-Site Trucks	16,029	< 1	3	16,741
Employee Commute On-Site	58	< 1	< 1	58
Employee Commute Off-Site	1,669	< 1	< 1	1,676
Backlands Electricity Consumption	0	0	0	1,004
AMP Electricity Consumption	0	0	0	372

Table 3.6-8: Annual Operational Emissions—Alternative 1, No Project (mty)

Source Category	Daily Emissions (lb/day)			
	CO2	CH4	N2O	CO2e
Total Operational Year 2026	72,156	2	5	74,977
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 2,560
Significance Threshold				10,000
Significant?				No
Year 2027				
OGV - Transit and Anchoring	36,539	< 1	2	37,067
OGV – Hoteling	1,954	< 1	< 1	1,993
Harbor Craft	298	< 1	< 1	298
CHE	8,050	< 1	< 1	8,063
Rail On-Site	383	< 1	< 1	387
Rail Off-Site	5,513	< 1	< 1	5,566
On-Site Trucks	1,808	< 1	< 1	1,898
Off-Site Trucks	16,508	< 1	3	17,241
Employee Commute On-Site	59	< 1	< 1	59
Employee Commute Off-Site	1,681	< 1	< 1	1,688
Backlands Electricity Consumption	0	0	0	1,030
AMP Electricity Consumption	0	0	0	385
Total Operational Year 2027	72,794	2	5	75,675
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 1,862
Significance Threshold				10,000
Significant?				No
Year 2028				
OGV - Transit and Anchoring	36,236	< 1	2	36,760
OGV – Hoteling	1,981	< 1	< 1	2,021
Harbor Craft	296	< 1	< 1	296
CHE	8,369	< 1	< 1	8,382
Rail On-Site	400	< 1	< 1	404
Rail Off-Site	5,661	< 1	< 1	5,716
On-Site Trucks	1,862	< 1	< 1	1,954

Table 3.6-8: Annual Operational Emissions—Alternative 1, No Project (mty)

Source Category	Daily Emissions (lb/day)			
	CO2	CH4	N2O	CO2e
Off-Site Trucks	17,062	< 1	3	17,820
Employee Commute On-Site	59	< 1	< 1	60
Employee Commute Off-Site	1,702	< 1	< 1	1,709
Backlands Electricity Consumption	0	0	0	3,034
AMP Electricity Consumption	0	0	0	403
Total Operational Year 2028	73,629	2	5	78,558
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				1,022
Significance Threshold				10,000
Significant?				No
Year 2036				
OGV - Transit and Anchoring	33,113	< 1	2	33,591
OGV – Hoteling	2,178	< 1	< 1	2,222
Harbor Craft	270	< 1	< 1	270
CHE	10,920	< 1	< 1	10,937
Rail On-Site	829	< 1	< 1	837
Rail Off-Site	9,051	< 1	< 1	9,139
On-Site Trucks	1,778	< 1	< 1	1,867
Off-Site Trucks	15,721	< 1	3	16,420
Employee Commute On-Site	76	< 1	< 1	76
Employee Commute Off-Site	556	< 1	< 1	558
Backlands Electricity Consumption	0	0	0	4,070
AMP Electricity Consumption	0	0	0	680
Total Operational Year 2036	74,491	3	5	80,667
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				3,130
Significance Threshold				10,000
Significant?				No
Year 2050				
OGV - Transit and Anchoring	47,808	< 1	2	48,497

Table 3.6-8: Annual Operational Emissions—Alternative 1, No Project (mty)

Source Category	Daily Emissions (lb/day)			
	CO2	CH4	N2O	CO2e
OGV – Hoteling	3,348	< 1	< 1	3,415
Harbor Craft	377	< 1	< 1	377
CHE	16,518	< 1	< 1	16,543
Rail On-Site	1,400	< 1	< 1	1,414
Rail Off-Site	11,233	< 1	< 1	11,342
On-Site Trucks	2,782	< 1	< 1	2,925
Off-Site Trucks	27,445	1	4	28,670
Employee Commute On-Site	146	< 1	< 1	147
Employee Commute Off-Site	1,088	< 1	< 1	1,092
Backlands Electricity Consumption				6,165
AMP Electricity Consumption				1,051
Total Operational Year 2050	12,145	4	8	121,639
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				44,102
Significance Threshold				10,000
Significant?				Yes
Year 2055				
OGV - Transit and Anchoring	49,002	< 1	2	49,712
OGV – Hoteling	3,882	< 1	< 1	3,959
Harbor Craft	437	< 1	< 1	437
CHE	19,148	< 1	< 1	19,178
Rail On-Site	1,623	< 1	< 1	1,639
Rail Off-Site	13,022	1	< 1	13,148
On-Site Trucks	3,225	< 1	< 1	3,391
Off-Site Trucks	31,816	1	5	33,236
Employee Commute On-Site	169	< 1	< 1	170
Employee Commute Off-Site	1,261	< 1	< 1	1,266
Backlands Electricity Consumption				7,225
AMP Electricity Consumption				1,484
Total Operational Year 2055	23,588	5	9	133,354

Table 3.6-8: Annual Operational Emissions—Alternative 1, No Project (mty)

Source Category	Daily Emissions (lb/day)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				55,817
Significance Threshold				10,000
Significant?				Yes
Year 2062				
OGV - Transit and Anchoring	50,905	< 1	3	51,646
OGV – Hoteling	4,730	< 1	< 1	4,825
Harbor Craft	533	< 1	< 1	533
CHE	23,336	< 1	< 1	23,373
Rail On-Site	1,979	< 1	< 1	1,998
Rail Off-Site	15,870	1	< 1	16,024
On-Site Trucks	3,931	< 1	< 1	4,132
Off-Site Trucks	38,774	1	6	40,505
Employee Commute On-Site	206	< 1	< 1	207
Employee Commute Off-Site	1,537	< 1	< 1	1,543
Backlands Electricity Consumption				7,225
AMP Electricity Consumption				1,484
Total Operational Year 2062	141,801	5	10	152,002
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				74,465
Significance Threshold				10,000
Significant?				Yes

Notes:

Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.

· NEPA does not require analysis of the No Project Alternative.

· Emissions might not precisely add due to rounding.

1
2
3
4
5

CEQA Impact Determination

Table 3.6-8 shows that operational GHG emissions minus the CEQA baseline under Alternative 1 No Project would exceed the GHG threshold of 10,000 mty in analysis years 2050, 2055, and 2062. Accordingly, GHG emissions would be significant under CEQA in those years.

1 **Mitigation Measures**

2 There are no discretionary actions that can be taken under this alternative through which
3 mitigation could be applied.

4 **Residual Impacts**

5 Impacts of Alternative 1 would be significant and unavoidable under CEQA for years
6 2050, 2055, 2062.

7 **NEPA Evaluation**

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

10 **Alternative 2 – No Federal Action (NFA)**

11 Alternative 2 is a NEPA-required alternative. This alternative (which represents the
12 NEPA baseline) includes the activities that would occur absent a USACE (Department
13 of the Army) permit. Absent a USACE permit, no dredging, dredged material disposal,
14 in-water pile installation, or new crane installation would occur, but backlands
15 improvements associated with expansion of the WBICTF on-dock railyard would occur.
16 The site would continue to operate as an approximately 186-acre container terminal,
17 handling approximately 1,332,000 TEUs per year by 2062. That throughput would
18 require approximately 1,127,418 one-way truck trips, 939 on-dock train trips, and 208
19 vessel calls per year. AMP facilities are installed and currently in use at Berths 121-131.

20 **Impact GHG-1: Would Alternative 2 generate GHG emissions, either
21 directly or indirectly, that would exceed the SCAQMD 10,000 mty
22 CO₂e threshold?**

23 Table 3.6-9 presents amortized annual GHG emissions associated with construction of
24 Alternative 2 (the expanded WBICTF railyard) without mitigation. Construction
25 emissions were determined by adding direct and indirect GHG emissions associated with
26 all construction elements and amortizing over the life of the proposed Project (37 years).
27 Table 3.6-12 shows amortized annual GHG emissions associated with construction,
28 annual GHG emissions associated with operational activities, and significance
29 determinations prior to application of mitigation.

**Table 3.6-9: Construction GHG Emissions – No Federal Action
Alternative Prior to Mitigation (mty)**

Source Category	CO ₂ e
Construction Year 2026	
Off-road Construction Equipment Exhaust	40
On-road Construction-Related Vehicles	11
Worker Vehicles	<1
Total Construction Year 2026	52
Construction Year 2027	
Off-road Construction Equipment Exhaust	67
On-road Construction-Related Vehicles	18

Worker Vehicles	1
Total Construction Year 2027	86
Amortized Construction	4

Notes:

- [1] Construction emissions reflect the construction activities for the NFA Alternative, which consist of the expansion of intermodal railyard at WBICTF.
- [2] On-road construction vehicle emissions include exhaust emissions from haul trucks and material delivery trucks.
- [3] Worker Vehicle emissions include exhaust emissions from construction worker commute.
- [4] Emissions might not add precisely due to rounding.
- [5] Amortized construction emissions are calculated as the sum of emissions from entire construction period, 2026 and 2027 in this case, divided by the life of the Project. For this analysis, the life of the project is assumed to be 37 years, counting from 2026 through end of 2062.

1

Table 3.6-10: Construction and Operational GHG Emissions – No Federal Action Alternative 2 Prior to Mitigation (mty)

	CO2	CH4	N2O	CO2e
Amortized Construction of Proposed Project				4
Year - 2026				
OGV - Transit and Anchoring	36,842	< 1	2	37,374
OGV – Hoteling	1,876	< 1	< 1	1,913
Harbor Craft	301	< 1	< 1	301
CHE	7,792	< 1	< 1	7,804
Rail On-Site	296	< 1	< 1	299
Rail Off-Site	5,732	< 1	< 1	5,787
On-Site Trucks	1,752	< 1	< 1	1,840
Off-Site Trucks	15,931	< 1	3	16,638
Employee Commute On-Site	58	< 1	< 1	58
Employee Commute Off-Site	1,669	< 1	< 1	1,676
Backlands Electricity Consumption	0	0	0	1,567
AMP Electricity Consumption	0	0	0	372
Total Operations 2026	72,248	0	4	75,630
Total Operations with Proposed Project Amortized Construction 2026				75,634
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 1903
Significance Threshold				10,000
Significant?				No
Year - 2027				
OGV - Transit and Anchoring	36,539	< 1	2	37,067
OGV – Hoteling	1,954	< 1	< 1	1,993
Harbor Craft	298	< 1	< 1	298
CHE	8,050	< 1	< 1	8,063

Table 3.6-10: Construction and Operational GHG Emissions – No Federal Action Alternative 2 Prior to Mitigation (mtt)

	CO2	CH4	N2O	CO2e
Rail On-Site	294	< 1	< 1	297
Rail Off-Site	5,853	< 1	< 1	5,910
On-Site Trucks	1,821	< 1	< 1	1,912
Off-Site Trucks	16,631	< 1	3	17,369
Employee Commute On-Site	59	< 1	< 1	59
Employee Commute Off-Site	1,681	< 1	< 1	1,688
Backlands Electricity Consumption				1,753
AMP Electricity Consumption				385
Total Operations 2027	73,182	2	5	76,794
Total Operations with Proposed Project Amortized Construction 2027				76,798
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 739
Significance Threshold				10,000
Significant?				No
Year 2028				
OGV - Transit and Anchoring	36,236	< 1	2	36,760
OGV – Hoteling	1,981	< 1	< 1	2,021
Harbor Craft	296	< 1	< 1	296
CHE	8,369	< 1	< 1	8,382
Rail On-Site	400	< 1	< 1	404
Rail Off-Site	5,670	< 1	< 1	5,725
On-Site Trucks	1,862	< 1	< 1	1,954
Off-Site Trucks	17,062	< 1	3	17,820
Employee Commute On-Site	59	< 1	< 1	60
Employee Commute Off-Site	1,702	< 1	< 1	1,709
Backlands Electricity Consumption	0	0	0	1,915
AMP Electricity Consumption	0	0	0	403
Total Operations 2028	73,638	2	5	77,448
Total Amortized Construction and Operations Emissions 2028				77,452
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				- 85
Significance Threshold				10,000
Significant?				No
Year 2036				
OGV - Transit and Anchoring	33,113	< 1	2	33,591
OGV – Hoteling	2,178	< 1	< 1	2,222
Harbor Craft	270	< 1	< 1	270

Table 3.6-10: Construction and Operational GHG Emissions – No Federal Action Alternative 2 Prior to Mitigation (mt_y)

	CO ₂	CH ₄	N ₂ O	CO ₂ e
CHE	10,920	< 1	< 1	10,937
Rail On-Site	1,083	< 1	< 1	1,094
Rail Off-Site	8,356	< 1	< 1	8,437
On-Site Trucks	2,022	< 1	< 1	2,123
Off-Site Trucks	18,036	< 1	3	18,838
Employee Commute On-Site	76	< 1	< 1	76
Employee Commute Off-Site	547	< 1	< 1	549
Backlands Electricity Consumption	0	0	0	2,573
AMP Electricity Consumption	0	0	0	680
Total Operations 2036	76,600	3	5	81,389
Total Amortized Construction and Operations Emissions 2036				81,393
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				3,857
Significance Threshold				10,000
Significant?				No
Year 2050				
OGV - Transit and Anchoring	47,808	< 1	2	48,497
OGV – Hoteling	3,348	< 1	< 1	3,415
Harbor Craft	377	< 1	< 1	377
CHE	16,518	< 1	< 1	16,543
Rail On-Site	1,648	< 1	< 1	1,664
Rail Off-Site	10,553	< 1	< 1	10,655
On-Site Trucks	2,517	< 1	< 1	2,646
Off-Site Trucks	25,836	< 1	4	26,989
Employee Commute On-Site	91	< 1	< 1	91
Employee Commute Off-Site	674	< 1	< 1	676
Backlands Electricity Consumption				3,895
AMP Electricity Consumption				1,051
Total Operations 2050	109,369	4	8	116,501
Total Amortized Construction and Operations Emissions 2050				116,505
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				38,968
Significance Threshold				10,000
Significant?				Yes
Year 2055				
OGV - Transit and Anchoring	49,002	< 1	2	49,712
OGV – Hoteling	3,882	< 1	< 1	3,959

Table 3.6-10: Construction and Operational GHG Emissions – No Federal Action Alternative 2 Prior to Mitigation (mtt)

	CO2	CH4	N2O	CO2e
Harbor Craft	437	< 1	< 1	437
CHE	19,148	< 1	< 1	19,178
Rail On-Site	1,910	< 1	< 1	1,929
Rail Off-Site	12,234	1	< 1	12,352
On-Site Trucks	2,918	< 1	< 1	3,068
Off-Site Trucks	29,951	1	5	31,288
Employee Commute On-Site	105	< 1	< 1	106
Employee Commute Off-Site	781	< 1	< 1	784
Backlands Electricity Consumption	0	0	0	4565
AMP Electricity Consumption	0	0	0	1231
Total Operations 2055	120,369	4	8	128,610
Total Amortized Construction and Operations Emissions 2055				128,614
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				51,077
Significance Threshold				10,000
Significant?				Yes
Year 2062				
OGV - Transit and Anchoring	50,905	< 1	3	51,646
OGV – Hoteling	4,730	< 1	< 1	4,825
Harbor Craft	533	< 1	< 1	533
CHE	23,336	< 1	< 1	23,373
Rail On-Site	2,328	< 1	< 1	2,350
Rail Off-Site	14,909	1	< 1	15,053
On-Site Trucks	3,556	< 1	< 1	3,739
Off-Site Trucks	36,501	1	6	38,130
Employee Commute On-Site	129	< 1	< 1	129
Employee Commute Off-Site	952	< 1	< 1	956
Backlands Electricity Consumption				5503
AMP Electricity Consumption				1484
Total Operations 2062	137,879	5	10	147,722
Total Amortized Construction and Operations Emissions 2062				147,726
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				70,189
Significance Threshold				10,000
Significant?				Yes

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Notes:

- 1 1) OGV - Transit and Anchoring also includes emissions from the AQMD Overwater Boundary to the State line.
 - 2 2) Backlands electricity includes electrical consumptions by buildings, lighting poles, wharf cranes and rail-mounted
 - 3 gantry cranes in the railyard as a result of the Alternative.
 - 4 3) Under No Federal Action Alternative, terminal operations during years 2026 and 2027 would decrease in
 - 5 throughput due to construction of the NFA Alternative, consisting of the expansion of WBICTF railyard. Year 2028 is
 - 6 the first year of full operations following completion of the No Federal Action Alternative construction.
 - 7 4) Emissions might not add precisely because of rounding. Decimal values for emissions were noted as “less than
 - 8 1” for simplicity. For more explanation, refer to the discussion in Section 3.2.4.1.
 - 9 5) Emissions from the construction activities required for the installation of electrical chargers, which will facilitate
 - 10 future all-electric cargo-handling equipment, have been integrated with the 2036 operational year emissions of the
 - 11 cargo-handling equipment.
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CEQA Impact Determination

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Table 3.6-12 shows that construction and operational GHG emissions minus the CEQA baseline under Alternative 2 (No Federal Action) would exceed the GHG threshold of 10,000 mty in 2050, 2055, and 2062. Accordingly, impacts of Alternative 2’s GHG emissions would be significant under CEQA prior to mitigation.

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Mitigation Measures

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Construction mitigation measures MM AQ-1 through MM AQ-6 and operational mitigation measures MM AQ-8 and MM AQ-10 (see Section 3.2, Air Quality and Meteorology) would reduce GHG emissions of Alternative 2 along with criteria pollutant emissions. In addition to the air quality mitigation measures, mitigation measures MM GHG-1 and MM GHG-2, directed at GHG emissions reduction specifically, are applied to Alternative 2.

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Table 3.6-11 shows mitigated construction emissions for Alternative 2 and Table 3.6-14 summarizes combined construction and operational emissions for Alternative 2 along with CEQA impact determinations after mitigation.

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Table 3.6-11: Construction GHG Emissions – No Federal Action Alternative 2 with Mitigation – (mty)

Source Category	CO ₂ e
Construction Year 2026	
Off-road Construction Equipment Exhaust	41
Marine Source Exhaust	0
Harbor Craft	0
On-road Construction-Related Vehicles	<1
Worker Vehicles	<1
Total Construction Year 2026	41
Construction Year 2027	
Off-road Construction Equipment Exhaust	68
Marine Source Exhaust	0
Harbor Craft	0
On-road Construction-Related Vehicles	<1
Worker Vehicles	<1
Total Construction Year 2027	68
Amortized Construction	3

Notes:

[1] Construction emissions reflect the construction activities for the NFA Alternative, which consist of the expansion of intermodal railyard at WBICTF.

[2] On-road construction vehicle emissions include exhaust emissions from haul trucks and material delivery trucks.

[3] Worker Vehicle emissions include exhaust emissions from construction worker commute.

[4] Construction emissions "with mitigation" are controlled based on the mitigation measures MMAQ-3 and MM AQ-2 presented in this document. Estimated co-benefits for GHGs are minimal based on available emission factors.

[5] Emissions might not add precisely due to rounding.

[6] Amortized construction emissions are calculated as the sum of emissions from entire construction period, 2026 and 2027 in this case, divided by the life of the Project. For this analysis, the life of the project is assumed to be 37 years, counting from 2026 through end of 2062.

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Table 3.6-12: Construction and Operational GHG Emissions – No Federal Action Alternative 2 with Mitigation (mty)

	CO ₂	CH ₄	N ₂ O	CO ₂ e
Amortized Construction of Proposed Project				3
Year - 2026				
OGV - Transit and Anchoring	36,153	< 1	2	36,678
OGV – Hoteling	1,876	< 1	< 1	1,913
Harbor Craft	301	< 1	< 1	301
CHE	7,792	< 1	< 1	7,804
Rail On-Site	296	< 1	< 1	299

Table 3.6-12: Construction and Operational GHG Emissions – No Federal Action Alternative 2 with Mitigation (mty)

	CO2	CH4	N2O	CO2e
Rail Off-Site	5,732	< 1	< 1	5,787
On-Site Trucks	1,752	< 1	< 1	1,840
Off-Site Trucks	15,931	< 1	3	16,638
Employee Commute On-Site	58	< 1	< 1	58
Employee Commute Off-Site	1,669	< 1	< 1	1,676
Backlands Electricity Consumption	0	0	0	1,567
AMP Electricity Consumption	0	0	0	372
Total Operations 2026	71,559	2	5	74,933
Total Operations with Proposed Project Amortized Construction 2026				74,936
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 2601
Significance Threshold				10,000
Significant?				No
Year - 2027				
OGV - Transit and Anchoring	35,850	< 1	2	36,370
OGV – Hoteling	1,954	< 1	< 1	1,993
Harbor Craft	298	< 1	< 1	298
CHE	8,050	< 1	< 1	8,063
Rail On-Site	294	< 1	< 1	297
Rail Off-Site	5,853	< 1	< 1	5,910
On-Site Trucks	1,821	< 1	< 1	1,912
Off-Site Trucks	16,631	< 1	3	17,369
Employee Commute On-Site	59	< 1	< 1	59
Employee Commute Off-Site	1,681	< 1	< 1	1,688
Backlands Electricity Consumption	0	0	0	1,753
AMP Electricity Consumption	0	0	0	385
Total Operations 2027	72,492	2	5	76,097
Total Operations with Proposed Project				76,101

Table 3.6-12: Construction and Operational GHG Emissions – No Federal Action Alternative 2 with Mitigation (mty)

	CO2	CH4	N2O	CO2e
Amortized Construction 2027				
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Alternative Minus CEQA Baseline				- 1,435
Significance Threshold				10,000
Significant?				No
Year 2028				
OGV - Transit and Anchoring	35,547	< 1	2	36,063
OGV – Hoteling	1,981	< 1	< 1	2,021
Harbor Craft	296	< 1	< 1	296
CHE	6,649	4	< 1	6,812
Rail On-Site	400	< 1	< 1	404
Rail Off-Site	5,670	< 1	< 1	5,725
On-Site Trucks	1,862	< 1	< 1	1,954
Off-Site Trucks	17,062	< 1	3	17,820
Employee Commute On-Site	59	< 1	< 1	60
Employee Commute Off-Site	1,702	< 1	< 1	1,709
Backlands Electricity Consumption				2,043
AMP Electricity Consumption				403
Total Operations 2028	71,229	6	5	75,308
Total Amortized Construction and Operations Emissions 2028				75,311
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				- 2,225
Significance Threshold				10,000
Significant?				No
Year 2036				
OGV - Transit and Anchoring	32,527	< 1	2	32,998
OGV – Hoteling	2,178	< 1	< 1	2,222

Table 3.6-12: Construction and Operational GHG Emissions – No Federal Action Alternative 2 with Mitigation (mty)

	CO2	CH4	N2O	CO2e
Harbor Craft	270	< 1	< 1	270
CHE	764	< 1	< 1	767
Rail On-Site	1,083	< 1	< 1	1,094
Rail Off-Site	8,356	< 1	< 1	8,437
On-Site Trucks	2,022	< 1	< 1	2,123
Off-Site Trucks	18,036	< 1	3	18,838
Employee Commute On-Site	76	< 1	< 1	76
Employee Commute Off-Site	547	< 1	< 1	549
Backlands Electricity Consumption				6,609
AMP Electricity Consumption				680
Total Operations 2036	65,858	2	5	74,662
Total Amortized Construction and Operations Emissions 2036				74,665
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				- 2,871
Significance Threshold				10,000
Significant?				No
Year 2050				
OGV - Transit and Anchoring	46,921	< 1	2	47,601
OGV – Hoteling	3,348	< 1	< 1	3,415
Harbor Craft	377	< 1	< 1	377
CHE	1,156	< 1	< 1	1,160
Rail On-Site	1,648	< 1	< 1	1,664
Rail Off-Site	10,553	< 1	< 1	10,655
On-Site Trucks	2,517	< 1	< 1	2,646
Off-Site Trucks	25,836	< 1	4	26,989
Employee Commute On-Site	91	< 1	< 1	91
Employee Commute Off-Site	674	< 1	< 1	676
Backlands Electricity Consumption				10,001
AMP Electricity Consumption				1,051

Table 3.6-12: Construction and Operational GHG Emissions – No Federal Action Alternative 2 with Mitigation (mty)

	CO2	CH4	N2O	CO2e
Total Operations 2050	93,121	4	8	106,327
Total Amortized Construction and Operations Emissions 2050				106,330
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				28,793
Significance Threshold				10,000
Significant?				Yes
Year 2055				
OGV - Transit and Anchoring	47,975	< 1	2	48,673
OGV – Hoteling	3,882	< 1	< 1	3,959
Harbor Craft	437	< 1	< 1	437
CHE	1,340	< 1	< 1	1,344
Rail On-Site	1,910	< 1	< 1	1,929
Rail Off-Site	12,234	1	< 1	12,352
On-Site Trucks	2,918	< 1	< 1	3,068
Off-Site Trucks	29,951	1	5	31,288
Employee Commute On-Site	105	< 1	< 1	106
Employee Commute Off-Site	781	< 1	< 1	784
Backlands Electricity Consumption	0	0	0	11,721
AMP Electricity Consumption	0	0	0	1,231
Total Operations 2055	101,533	4	8	116,893
Total Amortized Construction and Operations Emissions 2055				116,896
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				39,359
Significance Threshold				10,000
Significant?				Yes
Year 2062				

Table 3.6-12: Construction and Operational GHG Emissions – No Federal Action Alternative 2 with Mitigation (mty)

	CO2	CH4	N2O	CO2e
OGV - Transit and Anchoring	49,653	< 1	3	50,380
OGV – Hoteling	4,730	< 1	< 1	4,825
Harbor Craft	533	< 1	< 1	533
CHE	1,633	< 1	< 1	1,638
Rail On-Site	2,328	< 1	< 1	2,350
Rail Off-Site	14,909	1	< 1	15,053
On-Site Trucks	3,556	< 1	< 1	3,739
Off-Site Trucks	36,501	1	6	38,130
Employee Commute On-Site	129	< 1	< 1	129
Employee Commute Off-Site	952	< 1	< 1	956
Backlands Electricity Consumption				14,129
AMP Electricity Consumption				1,484
Total Operations 2062	114,923	5	10	133,348
Total Amortized Construction and Operations Emissions 2062				133,351
CEQA Impacts				
CEQA Baseline Emissions	74,812	3	5	77,537
Project Minus CEQA Baseline				55,814
Significance Threshold				10,000
Significant?				Yes

Notes:

- 1) OGV - Transit and Anchoring also includes emissions from the AQMD Overwater Boundary to the Stateline.
- 2) Backlands electricity includes electrical consumptions by buildings, lighting poles, wharf cranes and rail-mounted gantry cranes in the railyard as a result of the Alternative.
- 3) Under No Federal Action Alternative, terminal operations during years 2026 and 2027 would decrease in throughput due to construction of the NFA Alternative, consisting of the expansion of WBICTF railyard. Year 2028 is the first year of full operations following completion of the No Federal Action Alternative construction.
- 4) Emissions might not add precisely because of rounding. Decimal values for emissions were noted as “less than 1” for simplicity. For more explanation, refer to the discussion in Section 3.2.4.1.
- 5) Emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been integrated with the 2036 operational year emissions of the cargo-handling equipment.

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1 ***Residual Impacts***

2 Impacts would be reduced after mitigation but would remain significant and unavoidable
3 under CEQA for years 2050, 2055, and 2062 for Alternative 2.

4 **NEPA Evaluation**

5 The No Federal Action Alternative would involve the same construction activities as
6 would occur under the NEPA baseline. Therefore, there would be no difference between
7 Alternative 2 and the NEPA baseline.

8 **3.6.4.6 Summary of Impact Determinations**

9 As stated above for the Proposed Project and all project alternatives, GHG impacts
10 would be significant for GHG-1 under CEQA, but the threshold is not applicable under
11 NEPA for the Proposed Project or any of the alternatives. Mitigation measures,
12 particularly MM GHG-2, would reduce the residual impacts of the Proposed Project and
13 the No Federal Action Alternative to less than significant but impacts of the No Project
14 Alternative would be significant and unavoidable. Table 3.6-13 provides a summary of
15 the impact determinations of the Proposed Project and alternatives related to GHGs and
16 climate change. This table allows easy comparison of the potential impacts of the
17 Proposed Project and alternatives.

18 For each type of potential impact, the table provides a description of the impact, the
19 impact determination, any applicable mitigation measures, and residual impacts (i.e., the
20 impact remaining after mitigation). All impacts, whether significant or not, are included
21 in this table.

Table 3.6-13: Summary Matrix of Impacts and Mitigation Measures for GHGs Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Proposed Project	<p>GHG-1: The Proposed Project would generate GHG emissions, either directly or indirectly that would exceed the SCAQMD 10,000 mty CO₂e threshold.</p>	<p>CEQA: Significant impact. Operations would be significant for GHGs in 2027, 2036, and 2045.</p>	<p>MM GHG-1: LED Lighting. MM GHG-2: GHG Reduction Offsets. MM AQ-2: On-Road Trucks Used during Construction. MM AQ-3: Non-Road Construction Equipment. MM AQ-4: Cargo Ships Used During Construction. MM AQ-5: Dredging Non-Road Equipment. MM AQ-6: General Construction Mitigation Measure. MM AQ-8: Vessel Speed Reduction Program (VSRP). MM AQ-10: Cargo-Handling Equipment Emissions Standards. LM AQ-1: Cleanest Available Cargo Handling Equipment. LM AQ-2: Priority Access for Drayage</p>	<p>Impacts of operations would be less than significant.</p>
		<p>NEPA: Not applicable</p>	<p>Not applicable.</p>	<p>Not applicable</p>

Table 3.6-13: Summary Matrix of Impacts and Mitigation Measures for GHGs Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Alternative 1 – No Project	GHG-1: Alternative 1 would generate GHG emissions, either directly or indirectly that would exceed the SCAQMD 10,000 mty CO ₂ e threshold.	CEQA: Significant impact. Operations would be significant for GHGs in 2036 and 2045.	No mitigation can be applied to the No Project Alternative.	Significant and unavoidable. Impacts of operations would be significant and unavoidable for GHGs in 2036 and 2045.
		NEPA: Not applicable	Not applicable	Not applicable

Table 3.6-13: Summary Matrix of Impacts and Mitigation Measures for GHGs Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Alternative 2 – No Federal Action	GHG-1: Alternative 2 would generate GHG emissions, either directly or indirectly that would exceed the SCAQMD 10,000 mty CO ₂ e threshold.	CEQA: Significant impact. Operations would be significant for GHGs in 2036 and 2045.	MM GHG-1: LED Lighting. MM GHG-1: GHG Offset Credits MM AQ-2: On-Road Trucks Used during Construction. MM AQ-3: Non-Road Construction Equipment. MM AQ-6: General Construction Mitigation Measure. MM AQ-7: Renewable Diesel Fuel for Construction Equipment and On-Road Trucks. MM AQ-8: Vessel Speed Reduction Program (VSRP). MM AQ-10: Cargo-Handling Equipment Emissions Standards. LM AQ-1: Zero-Emission Cargo Handling Equipment (CHE) Transition. LM AQ-2: Priority Access for Drayage.	Impacts of operations would be less than significant.
		NEPA: Not applicable	Not applicable.	Not applicable

3.6.5 Mitigation Monitoring

The mitigation monitoring program below is applicable to the Proposed Project and Alternative 2 under CEQA only. Mitigation is not applicable under NEPA. Air quality mitigation measures that also reduce GHG emissions are addressed in Section 3.2, Air

Quality and Meteorology, and monitoring of those measures is described in Section 3.2.6.

<p>GHG-1: The Proposed Project would generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO₂e threshold.</p> <p>GHG-1: Alternative 2 No Federal Action would generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO₂e threshold.</p>	
Mitigation Measure	<p>MM GHG-1: LED Lighting. All lighting within the interior of buildings on the premises and outdoor high mast terminal lighting will be replaced with LED lighting or a technology with similar energy-saving capabilities by the first year after completion of construction for the Proposed Project or alternative.</p>
Timing	<p>Tenant must complete replacement of lighting by the end of the first year of construction completion.</p>
Methodology	<p>Tenant shall include MM GHG-1 in the construction specifications.</p>
Responsible Parties	<p>Tenant through its own construction contractor in conjunction with LAHD.</p>
Mitigation Measure	<p>MM GHG-2: GHG Reduction Offsets. The Tenant and/or LAHD shall be required to purchase and retire carbon offsets related to activities that reduce, avoid, destroy, or sequester an amount of GHG emissions in an off-site location to offset the equivalent amount of GHG emissions generated by the Project in excess of the City's significance threshold of 10,000 metric tons. From first year of the Permit through the end of the term of the Permit, the Tenant and/or LAHD shall purchase and retire carbon offsets each year in an amount that would be the equivalent of the Project's estimated residual GHG emissions. The estimated residual emissions for each calendar year shall be based upon the calculations in Appendix C of the Final EIS/EIR prepared for the Proposed Project except as adjusted in accordance with paragraph a) or b), below.</p> <p>The LAHD is in the process of developing a Greenhouse Gas Program. The Program shall be used for GHG-reducing projects and programs approved by the Port of Los Angeles. If that Program is established during the term of the Permit, the Tenant and/or LAHD shall have the option to offset the required amount of GHG emissions through a funding contribution to the Greenhouse Gas Program rather than towards purchasing carbon offsets from a CARB-recognized registry. While the LAHD Greenhouse Gas Program is currently under development, the Tenant and/or LAHD shall purchase and retire carbon offsets from a CARB-recognized offset registry as follows:</p> <p>Carbon offsets: The Tenant and/or LAHD shall purchase and retire carbon offsets from a CARB-recognized registry to ensure that offsets will result in real, permanent, additional, quantifiable, verifiable, and enforceable reductions. The carbon offsets shall be verifiable and enforceable in accordance with the registry's applicable standards, practices, or protocols.</p> <p>The order of priority for purchasing (any one or more) carbon offsets shall be considered as follows:</p> <ul style="list-style-type: none"> ii. Originating within the local area; iii. Originating within the South Coast Air Basin; iv. Originating within the state of California; or v. If sufficient local and in-state offsets are not available, conforming national offsets registered with a CARB-recognized registry. <p>Adjustment of Tenant's Required Offsets through Other Verified GHG Emission Reductions: The Tenant and/or LAHD may pursue the following</p>

	<p>modifications to the Project’s total estimated GHG emissions identified in this measure. These modifications may be pursued in conjunction with or independent of each other on an up to annual basis.</p> <p><i>a) Adjustment in GHG Emissions</i></p> <p>In the event of changes in activities, efficiency, reduced operations, regulations, or for any other purpose, the Tenant may request an adjustment of the required carbon offsets based on an evaluation of actual GHG emissions rather than future projected GHG emission calculations in this EIR. If the actual GHG emissions, minus the 2019 Baseline, do not exceed the significance threshold of 10,000 mty, no carbon offsets shall be required. To adjust the Tenant’s required number of carbon offsets for purchase, the Tenant shall make a request in writing to the LAHD for review and approval for the calendar year under consideration and shall submit a report within 60 days that quantifies the actual greenhouse gas emissions by an expert or an independent, qualified third-party. The evaluation of actual greenhouse gas emissions must be performed using acceptable industry standards and protocols for all sources that were included in the Project’s GHG emissions calculations under Impact GHG-1. LAHD review shall occur within 30 days of receipt of the submitted report. Any expenses incurred by LAHD in processing the Tenant’s request, including retaining an independent third-party verifier to peer review the report, shall be borne by the Tenant. Alternatively, LAHD may implement a review for its own purpose, subject to the same quantification process described above, to adjust GHG emissions at any time during the life of the Project.</p> <p>or</p> <p><i>b) Implementation of Additional GHG Reduction Methods</i></p> <p>In addition, the Tenant may request a re-evaluation of required carbon offsets to be purchased according to this paragraph. The Tenant may implement different and additional GHG reduction methods if new technology and/or other feasible measures become available during the term of the Permit. To adjust the Tenant’s required number of carbon offsets for purchase, the Tenant shall identify such additional GHG reduction actions and must quantify the GHG emission reductions from these GHG reduction actions by an independent, qualified third-party verifier. Once the GHG reduction actions are found to be feasible and are reviewed and approved by LAHD staff, the Tenant may request that LAHD reduce its required purchase of carbon offsets by the equivalent amount of demonstrated reduction. Any expenses incurred by LAHD in processing the Tenant’s request, including retaining a third-party verifier, shall be borne by the Tenant.</p>
Timing	Payable during operations on an annual basis upon substantial completion of Project construction.
Methodology	LAHD shall include MM GHG-2 in the lease agreement with tenant. LAHD shall monitor implementation of mitigation measures during operation.
Responsible Parties	LAHD, Tenant

3.6.6 Significant Unavoidable Impacts

Construction and operational GHG emissions under Impact GHG-1 would be less than significant after mitigation under CEQA for the Proposed Project and Alternative 2 No Federal Action. Operational GHG emissions under Impact GHG-1 would be significant and unavoidable under CEQA for Alternative 1 No Project. A significance determination regarding GHG emissions is not made under NEPA.