Air Quality and Greenhouse Gas Emissions Technical Report

Oceanside Pier View Way Bridges and Lifeguard Headquarters and Beachfront Facilities Phase II Project

City of Oceanside, California

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A Air Quality and Greenhouse Gas Emissions CalEEMod Outputs and Estimated Emissions

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbon
CH_4	methane
City	City of Oceanside
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of San Diego
DPM	diesel particulate matter
EO	Executive Order
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
GWP	global warming potential
IPCC	Intergovernmental Panel on Climate Change
HAP	hazardous air pollutant
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
JSBCC	Junior Seau Beach Community Center
MMT	million metric tons
MPO	Metropolitan Planning Organization
MT	metric ton
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
O_3	ozone
PFC	perfluorocarbon
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns

Acronym/Abbreviation	Definition
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
ppm	part per million
PRC	California Public Resources Code
Project	Pier View Way Bridges and Lifeguard Headquarters and Beachfront Facilities Phase II Project
RAQS	Regional Air Quality Strategy
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SLCP	Short-Lived Climate Pollutant
SO_2	sulfur dioxide
SO_x	sulfur oxides
TAC	toxic air contaminant
VOC	volatile organic compound
ZEV	zero-emission vehicle

Executive Summary

The purpose of this technical report is to assess the potential air quality and greenhouse gas (GHG) impacts associated with implementation of the Pier View Way Bridges and Lifeguard Headquarters and Beachfront Facilities Phase II Project (Project). This assessment uses the significance thresholds found in Appendix G of the California Environmental Quality Act Guidelines. This report is intended to support the Program Environmental Impact Report prepared for the Project.

Project Overview

The Project would involve development of three City owned facilities including, the Pier View Way Bridges (Pier View Way Bridges) and Lifeguard Headquarters, the Junior Seau Beach Community Center (JSBCC) and the Junior Seau Amphitheater/Bandshell. The Project consists of two phases: (1) the Pier View Way Bridges and Lifeguard Headquarters Phase and (2) the Beachfront Facilities Phase II. The Beachfront Facilities Phase would occur after the completion of the Pier View Way Bridges and Lifeguard Headquarters Phase. The two phases are referred to collectively as "the Project" herein. Given the programmatic/concept level of development proposed for Betty's Lot, air quality and greenhouse gas analysis would be speculative and would be subject to project specific analysis at which time the City advances proposed improvements

Air Quality

The air quality impact analysis evaluated the potential for adverse impacts to air quality due to construction and operational emissions resulting from the Project. Impacts were evaluated for their significance based on the San Diego Air Pollution Control District's (SDAPCD) mass daily criteria air pollutant thresholds of significance. Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards (criteria) for outdoor concentrations to protect public health. Criteria air pollutants include ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide, particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. Pollutants that were evaluated include volatile organic compounds (VOCs) (also referred to as reactive organic gases), oxides of nitrogen (NO_x), CO, sulfur oxides, PM_{10}, and $PM_{2.5}$. VOCs and NO_x are important because they are precursors to ozone.

Air Quality Plan Consistency

If a project proposes development that is greater than that anticipated in the local plan and the growth projections set by the San Diego Association of Governments, the project might be in conflict with the State Implementation Plan and Regional Air Quality Strategy, and therefore may contribute to a potentially significant cumulative impact on air quality. The proposed Project was deemed to be consistent with the current air quality plan because it is consistent with the current land use and zoning designation, and the anticipated growth associated with the Project does not exceed that projected by the San Diego Association of Governments. In addition, the Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations. Based on these considerations, impacts related to the Project's potential to conflict with or obstruct implementation of the applicable air quality plan would be **less than significant**.

Construction Criteria Air Pollutant Emissions

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). The maximum daily construction emissions would not exceed the SDAPCD significance thresholds for VOCs, NO_x, CO, sulfur oxides, PM_{10}, or $PM_{2.5}$ during construction. Therefore, the Project would have a **less-than-significant** impact.

Operational Criteria Air Pollutant Emissions

The analysis herein assumed an operational year of 2029 after completion of the Pier View Way Bridges and Lifeguard Headquarters Phase and 2034 as the first full year of operations after completion of the Beachfront Facilities Phase. Operation of the Project would generate operational criteria air pollutants from mobile sources (vehicles), area sources (consumer product use, architectural coatings, and landscape maintenance equipment), and energy (natural gas). Maximum operational emissions would not exceed the SDAPCD operational significance thresholds for VOCs, NO_x, CO, sulfur oxides, PM_{10}, or $PM_{2.5}$. This impact would be **less than significant**.

Cumulative Impacts

The potential for a project to result in a cumulatively considerable impact, per SDAPCD guidance and thresholds, is based on a project's potential to exceed the project-specific daily thresholds. Because maximum construction and operational emissions would not exceed the SDAPCD significance thresholds for VOCs, NO_x, CO, sulfur oxides, PM_{10}, or $PM_{2.5}$, the Project would not result in a cumulatively considerable increase in criteria air pollutants. In addition, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the State Implementation Plan and Regional Air Quality Strategy, and would not be considered to result in cumulatively considerable impacts from operational emissions. The Project is consistent with the San Diego Association of Governments growth projections; thus, it would be consistent at a regional level with the underlying growth forecasts in the State Implementation Plan and Regional Air Quality Strategy. As a result, the Project would not result in a cumulatively considerable contribution to regional ozone concentrations or other criteria pollutant emissions. Cumulative impacts for construction and operation would be **less than significant** for the Project.

Exposure of Sensitive Receptors

[To be updated – consistent with pending Health Risk Assessment]

Other Emissions

Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application, which would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Impacts associated with odors during construction would be **less than significant**. The Project would be a mixed-use development that would not include land uses with sources that have the potential to generate substantial odors, and impacts associated with odors during operation would be **less than significant**.

Greenhouse Gas Emissions

Global climate change is primarily considered a cumulative impact, but must also be evaluated on a project level under the California Environmental Quality Act. A project contributes to this potential impact through its incremental emissions combined with the cumulative increase of all other sources of GHG emissions. GHGs are gases that absorb infrared radiation in the atmosphere. Principal GHGs regulated under state and federal law and regulations include carbon dioxide (CO_2), methane, and nitrous oxide. GHG emissions are measured in metric tons (MT) of CO_2 equivalent (CO_2e), which account for weighted global warming potential factors for methane and nitrous oxide.

Project Impacts

Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The Project would generate operational GHG emissions from area sources (landscape equipment), energy sources (electricity consumption and natural gas combustion), mobile sources (vehicle trips), water supply and wastewater treatment, solid waste, and refrigerants. Estimated annual Project-generated operational GHG emissions at buildout in 2034 would be approximately 200 MT CO_2e per year. Estimated annual Project-generated operational emissions plus amortized Project construction emissions would be approximately 326 MT CO_2e per year. When considering the existing scenario operations, which are approximately 237 MT CO_2e per year, the Project would emit an approximate net of 89 MT CO_2e per year.

As discussed in Section 3.4, Impact Analysis, of this report, Project operational emissions in 2034 plus amortized Project construction emissions would be under the City's Climate Action Plan bright-line threshold of 900 MT CO_2e per year, indicating no additional analysis is required to complete the Climate Action Plan Consistency Checklist to ensure that emission targets identified in the City's Climate Action Plan can be achieved considering the additional emissions. As such, the Project would not generate GHG emissions that would have a significant impact on the environment, and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs; therefore, the impact would be **less than significant**.

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1 Introduction

1.1 Report Purpose and Scope

The purpose of this technical report is to assess the potential air quality and greenhouse gas (GHG) emissions impacts associated with construction and operation of the Pier View Way Bridges and Lifeguard Headquarters and Beachfront Facilities Phase II Project (Project). This analysis uses the significance thresholds found in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 California Code of Regulations [CCR] 15000 et seq.), the emissions-based significance thresholds recommended by the San Diego Air Pollution Control District (SDAPCD), and other applicable thresholds.

1.2 Existing Conditions

The Project site is located on the west side of N. Pacific Street along the Pacific Ocean and Oceanside City Beach between Civic Center Drive and Parking Lot #28 to the north and 1st Street to the south in the City of Oceanside, California, in northwestern San Diego County. Located on Assessor's Parcel Numbers 147-074-15 and 147-074-14, the site is approximately 0.76 miles west of the Interstate-5, the nearest major access-controlled highway. The Project site is located within the Downtown District, Subdistrict 15 (D-15), consistent with the City's Zoning Ordinance. This subdistrict is intended to provide public facilities, public parks, open spaces, and other public oriented uses. No changes to the existing uses are proposed.

The site is currently multi-use and is comprised of four City owned facilities: the Pier View Way Bridges (Pier View Way Bridges) and Lifeguard Headquarters, the JSBCC, the Junior Seau Amphitheater/Bandshell, and Parking Lot #30 (Betty's Lot).

The Pier View Way Bridges provide the primary entrance and exit to the Oceanside Municipal Pier. The Pier View Way Bridges are approaching 100 years in age, and despite continued maintenance efforts by the City over the years, most recently in 2016-2018, the structures have continued to deteriorate. As a result, the Pier View Way Bridges are approaching the end of their service life and require a long-term solution (retrofit or replacement) consistent with the approved Pier View Way Bridge and Lifeguard Headquarters Feasibility Study (Moffatt and Nichol 2023).

The City's Lifeguard Service is operated out of its headquarters located at the western end and base of the Pier View Way Bridges in the space originally used as a public dining area. The Lifeguard Headquarters, constructed in 1987, is integral with the Pier View Way Bridges and has experienced continued structural deterioration. Furthermore, lifeguard services have outgrown the current headquarters facility, necessitating a larger space to accommodate current and future operational growth.

The JSBCC is a 16,884 square-foot facility located immediately north of the Pier View Way Bridges and bordered by The Strand to the west, the pier plaza to the south, and N Pacific Street to the east. The JSBCC includes a surface parking lot surrounding the facility to the north and west.

Located directly south of the Pier View Way Bridges, the Junior Seau Amphitheater and Bandshell are an outdoor venue for concerts, graduation ceremonies, and special events. They are bordered to the west by The Strand, to the east by N. Pacific Street, and to the south by the City's Beach Operations Center and Betty's Lot.

Note that while the Betty's Lot is included as part of the Project site, this analysis does not assess the potential environmental impacts associated with the conceptual development of the Betty's Lot site.

1.3 Project Description

The Project would consist of multiple design components. The Pier View Way Bridges and Lifeguard Headquarters Phase consists of renovations to the existing Pier View Way Bridges and the reconfiguration and expansion of lifeguard operations buildings. The Beachfront Facilities Phase consists of varying reconstructions and renovations to the JSBCC and Junior Seau Amphitheater and Bandshell.

Pier View Way Bridges

As the Pier View Way Bridges are approaching the end of their service life and require interventions to address the age and deterioration, the Project would involve reconstructing the bridges to match the original structure and maintain its ongoing use, functionality, and continued public safety. Reconstruction of the Pier View Way Bridges would involve an in-kind replacement that maintains the look, feel, and character-defining features of the existing structure. The reconstructed option would include new structural members and maximize the service life of the new structure to approximately 75 to 100 years by reconstructing it with competent materials and detailing that meets current design and seismic standards.

Lifeguard Headquarters

The Project proposes interior redevelopment of the Lifeguard Headquarters, located west of The Strand. As the building is limited in size and must stay within the 3,700 square foot historic shell configuration, the Project proposes a new space layout and floor plan to retain and optimize key space requirements to maintain essential operations and maximize public safety at the current location. The Lifeguard Headquarters would be reconstructed on its original location and would include workstations, preparation area, first aid area, and equipment storage area.

Lifeguard Support Facility

To accommodate current and future Lifeguard Service needs, the Project proposes a new Lifeguard Support Facility to supplement the Lifeguard Headquarters. Proposed to the east of The Strand, it would address Lifeguard Service growing safety services, space needs as well sea level rise concerns. The building is an essential facility for the City's Lifeguard operations. This component would also include the visitor-serving lease restaurant space and provide enhanced amenities, including a new public view deck. The overall square footage for the Lifeguard Support Facility is anticipated to be approximately 1,363 square feet.

Community Plaza Area

The Project includes various improvements to the existing community plaza area, located between the Pier View Way Bridges and JSBCC, and to public accommodations. These improvements and enhanced amenities are intended to serve the community, increasing accessibility, and overall connectivity between features contained

within the Project area. These improvements include ADA access to The Strand and beach, a public viewing deck, a first aid patio and courtyard, a visitor-serving leased restaurant space, a public plaza, and landscaping.

Junior Seau Beach Community Center

The Project would include a range of minor interior and exterior improvements to the JSBCC. Cosmetic and non-structural improvements would include the repair and replacement of floor, wall, ceiling, and building finishes, new energy efficient glazing within existing building openings, new doors and door hardware and new building interior and exterior code required improvements and building identification signage. Additionally, the JSBCC would undergo improvements to the HVAC system.

Junior Seau Amphitheater and Bandshell

The Project would include the demolition and reconstruction of the outdoor stepped amphitheater and bandshell. In addition to creating a new plaza area, landscaping, and site stairs and pedestrian ramps, the Project would alter the amphitheater to accommodate a total of 1,757 seats (a smaller capacity than the 2,500 seats currently supported by the site), including 26 wheelchair seats. The amphitheater site would also include 17,127 square feet of floor area on two levels, serving storage, event production space, a green room, dressing rooms, utility support rooms, and restrooms.

1.4 Project Design Features

The proposed project would implement construction-related and operational Project Design Features (PDFs) intended to reduce emissions of criteria air pollutants and toxic air contaminants (TACs), as follows:

PDF-AQ-1 Prior to the commencement of any construction activities, the project applicant or its designee shall provide evidence to the City of Oceanside (City) that (1) for off-road equipment with engines rated at 50 horsepower or greater, no construction equipment shall be used that is less than Tier 4 Final, and (2) for off-road equipment with engines rated less than 50 horsepower, all construction equipment used shall be electrically powered. An exemption from this requirement may be granted if (1) the applicant documents equipment with Tier 4 engines are not reasonably available, and (2) the required corresponding reductions in criteria air pollutant emissions can be achieved for the project from other combinations of construction equipment (for example, another piece of equipment can be replaced with a zero-emission equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards). Before an exemption may be granted, the applicant's construction contractor shall (1) demonstrate that at least three construction fleet owners/operators in San Diego County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within San Diego County during the desired construction schedule, and (2) the proposed replacement equipment has been evaluated using the California Emissions Estimator Model or other industry standard emission estimation method and documentation has been provided to the City to confirm that necessary project-generated emissions reductions are achieved. This PDF would be required as imposed Conditions of Approval by the City of Oceanside (City) to ensure that they are implemented during construction and operation of the project.

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2 Air Quality

2.1 Environmental Setting

2.1.1 Climate and Topography

The Project site is located within the San Diego Air Basin (SDAB) and is subject to the SDAPCD guidelines and regulations. The SDAB is 1 of 15 air basins that geographically divide the State of California. The weather of the San Diego region, as in most of Southern California, is influenced by the Pacific Ocean and its semi-permanent, high--pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average temperature ranges (in Fahrenheit [°F]) from the mid-40s to the high 90s. Most of the region's precipitation falls from November to April with infrequent (approximately 10%) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches; the amount increases with elevation as moist air is lifted over the mountains to the east.

The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east. Along with local meteorology, the topography influences the dispersal and movement of pollutants in the SDAB. The mountains to the east prohibit dispersal of pollutants in that direction and help trap them in inversion layers as described in the next section.

The interaction of ocean, land, and the Pacific High-Pressure Zone maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

2.1.2 San Diego Air Basin Climatology

The SDAB lies in the southwest corner of California, comprises the entire San Diego region (covering approximately 4,260 square miles), and is an area of high air pollution potential. The SDAB experiences warm summers, mild winters, infrequent rainfall, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The climate also drives the pollutant levels. The climate of San Diego is classified as Mediterranean, but it is incredibly diverse due to the topography. The climate is dominated by the Pacific High-Pressure System that results in mild, dry summers and mild, wet winters. The Pacific High drives the prevailing winds in the SDAB. The winds tend to blow onshore during the daytime and offshore at night. In the fall months, the SDAB is often impacted by Santa Ana winds. These winds are the result of a high-pressure system over the Nevada–Utah region that overcomes the westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean (SDAPCD 2015). The winds blow the air basin's pollutants out to sea. However, a weak Santa Ana can transport air pollution from the South Coast Air Basin and greatly increase San Diego's ozone (O_3) concentrations. A strong Santa Ana also primes vegetation for firestorm conditions.

The SDAB experiences frequent temperature inversions. Subsidence inversions occur during the warmer months as descending air associated with the Pacific High-Pressure Zone meets cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. Another type of inversion, a radiation

inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses can also trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce O_3, commonly known as smog. Smog is a combination of smoke and other particulates, O_3, hydrocarbons, oxides of nitrogen (NO_x), and other chemically reactive compounds that, under certain conditions of weather and sunlight, may result in a murky brown haze that causes adverse health effects (CARB 2023a).

Light daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to emissions of carbon monoxide (CO) and oxides of nitrogen (NO_x). CO concentrations are generally higher in the morning and late evening. In the morning, CO levels are elevated due to cold temperatures and the large number of motor vehicles traveling. Higher CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the basin are associated with heavy traffic. Nitrogen dioxide (NO_2) levels are also generally higher during fall and winter days when O_3 concentrations are lower.

2.1.3 Pollutants and Effects

2.1.3.1 Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, NO_2, CO, sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 10 microns ($PM_{2.5}$), and lead. These pollutants are discussed in the following paragraphs.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (also referred to as reactive organic gases). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at Earth's surface in the lower atmosphere (tropospheric O_3).[2] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in

[1] The following descriptions of health effects for each of the criteria air pollutants associated with Project construction and operations are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2023) and the California Air Resources Board's "Glossary of Air Pollutant Terms" (CARB 2023a) published information.

[2] The troposphere is the layer of Earth's atmosphere nearest to the surface of Earth, extending outward approximately 5 miles at the poles and approximately 10 miles at the equator.

the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2020). Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in and can cause shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. Although there are relatively few studies of O_3's effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2023b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x, which includes NO_2 and NO, plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_2 is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources (such as electric utility and industrial boilers).

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2023). A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and, for children, they typically spend more time outdoors. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2023c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbons, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships,

aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, older adults, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2023d).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older adults and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2023e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma. SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) is approximately $1/7$ the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine

particulate matter ($PM_{2.5}$) is roughly $^1/_{28}$ the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2023f).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2023f).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood because children are highly susceptible to the effects of lead. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor that has been detected near landfills, sewage plants, and hazardous waste sites due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the main sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered toxic air contaminants (TACs). There are no separate health standards for VOCs as a group.

2.1.3.2 Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to acceptable levels.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about $^1/_{70}$ the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2023g). DPM is typically composed of carbon particles (soot, also called black carbon) and numerous organic compounds, including over 40 known carcinogenic organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2023g). In August 1998, CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others.

Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same noncancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2023g). Those most vulnerable to noncancer health effects are children, whose lungs are still developing, and older adults, who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. San Diego County is not considered a highly endemic region for Valley Fever because it has 12.7 cases per 100,000 people (CDPH 2022). In the zip code area of the Project site (92054), the case rate was reported to be even lower, reported as 4.9 cases per 100,000 people (County of San Diego 2021). In contrast, the most recent CDPH data from 2022 indicates that the statewide annual incident rate was 19.1 per 100,000 people. The California counties considered highly endemic for Valley Fever include Kern (264.9 per 100,000), Kings (111.0 per 100,000), Tulare (65.7 per 100,000), San Luis Obispo (51.5

per 100,000), Fresno (44.3 per 100,000), Madera (32.4 per 100,000), and Ventura (28.3 per 100,000), which, together, accounted for 50.5% of the reported cases in California in 2022 (CDPH 2022).

2.1.4 Sensitive Receptors

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion.

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved According to the SDAPCD, sensitive receptors are those who are especially susceptible to adverse health effects from exposure to TACs, such as children, older adults, and people who are ill. Sensitive receptors include residences, schools (grades Kindergarten through 12), libraries, day care centers, nursing homes, retirement homes, health clinics, and hospitals within 2 kilometers of the source (SDAPCD 2022). The closest sensitive receptors to the Project site are multi-family residences adjacent to the Project site along North Pacific Street to the north and east.

2.2 Regulatory Setting

2.2.1 Federal Regulations

2.2.1.1 Criteria Pollutants

The federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. EPA is responsible for implementing most aspects of the CAA, including the setting of the National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutant (HAP) standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions.

Under the CAA, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The NAAQS describes acceptable air quality conditions designed to protect health and welfare. The CAA requires EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan (SIP) that demonstrates how those areas will attain CAA standards within mandated time frames. Table 1 below contains the NAAQS.

2.2.1.2 Hazardous Air Pollutants

HAPs include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. The 1977 CAA amendments required EPA to identify national emission standards for carbon monoxides to protect public health and welfare. The 1990 CAA amendments expanded the control program for carbon monoxides and identified 189 substances and chemical families as carbon monoxides.

2.2.2 State Regulations

2.2.2.1 Criteria Pollutants

The California CAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California CAA of 1988, responding to the CAA, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment. The CAAQS describes adverse conditions; therefore, monitored ambient air quality concentrations must be below these standards before a basin can demonstrate attainment. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

The NAAQS and CAAQS are presented in Table 1.

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	—	Same as primary standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
	Annual arithmetic mean	20 µg/m³	—	Same as primary standard
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j, k]	30-day average	1.5 µg/m³	—	—
	Calendar quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24- hours	25 µg/m³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2024a, EPA 2024a.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³= milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations (CCR).

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Local Ambient Air Quality Monitoring Data

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County that measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. Representative ambient concentrations of pollutants from 2021 through 2023 are presented in Table 2. The Camp Pendleton monitoring station is the closest monitoring station to the Project site for concentrations for O_3 and NO_2. The San Diego–Rancho Carmel Drive monitoring station is the closest station with monitoring data for the selected years for CO and $PM_{2.5}$. The closest monitoring station for PM_{10} and SO_2 is the El Cajon monitoring station.

Table 2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2021	2022	2023	2021	2022	2023
Ozone (O_3) (Camp Pendleton)									
Maximum 1-hour concentration	ppm	California	0.09	0.074	0.076	0.090	0	0	0
Maximum 8-hour concentration	ppm	California	0.070	0.059	0.067	0.077	0	0	1
		National	0.070	0.059	0.067	0.077	0	0	1
Nitrogen Dioxide (NO_2) (Camp Pendleton)									
Maximum 1-hour concentration	ppm	California	0.18	0.059	0.050	0.063	0	0	0
		National	0.100	0.059	0.050	0.063	0	0	0
Annual concentration	ppm	California	0.030	ND	0.005	0.005	—	—	—
		National	0.053	0.006	0.005	0.005	—	—	—
Carbon Monoxide (CO) (San Diego–Rancho Carmel Drive)									
Maximum 1-hour concentration	ppm	California	20	ND	ND	ND	ND	ND	ND
		National	35	3.0	2.2	1.6	0	0	0

Table 2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2021	2022	2023	2021	2022	2023
Maximum 8-hour concentration	ppm	California	9.0	ND	ND	ND	ND	ND	ND
		National	9	1.8	1.2	1.1	0	0	0
Sulfur Dioxide (SO_2) (El Cajon)									
Maximum 1-hour concentration	ppm	National	0.075	0.0016	0.0008	0.0007	0	0	0
Maximum 24-hour concentration	ppm	National	0.14	0.0003	0.0003	0.0003	0	0	0
Annual concentration	ppm	National	0.030	0.00006	0.00006	0.00006	—	—	—
Coarse Particulate Matter (PM_{10}) (El Cajon)[a]									
Maximum 24-hour concentration	µg/m³	California	50	ND	ND	ND	ND (ND)	ND (ND)	ND (ND)
		National	150	40.0	44.0	42.0	0.0 (0)	0.0 (0)	0.0 (0)
Annual concentration	µg/m³	California	20	ND	ND	ND	—	—	—
Fine Particulate Matter ($PM_{2.5}$) (San Diego–Rancho Carmel Drive)[a]									
Maximum 24-hour concentration	µg/m³	National	35	23.5	14.9	23.2	0.0 (0)	0.0 (0)	0.0 (0)
Annual concentration	µg/m³	California	12	ND	ND	ND	—	—	—
		National	12.0	8.5	7.6	8.1	—	—	—

Sources: CARB 2024b; EPA 2024b. Monitoring station represented for each source is noted in parentheses following the pollutant monitored.

Notes: ppm = parts per million by volume; — = not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value.

The Camp Pendleton monitoring station is located at 21441-W B Street, Oceanside, California.

The El Cajon monitoring station is located at 533 First Street, El Cajon, California.

The San Diego–Rancho Carmel Drive monitoring station is located at 11403 Rancho Carmel Drive, San Diego, California.

Data taken from CARB and EPA represent the highest concentrations experienced over a given year.

Exceedances of national and California standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a California 24-hour standard for $PM_{2.5}$.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 day to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

SDAB Attainment Designation

Pursuant to the 1990 CAA Amendments, EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. As previously discussed, these standards are set by EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable."

The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are redesignated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California CAA, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on the CAAQS rather than the NAAQS.

Table 3 summarizes SDAB's federal and state attainment designations for each of the criteria pollutants.

Table 3. San Diego Air Basin Attainment Designation

Pollutant	Federal Designation	State Designation
Ozone (O_3) – 8 hour	**Nonattainment**	**Nonattainment**
Ozone (O_3)– 1 hour	Attainment[a]	**Nonattainment**
Carbon Monoxide	Attainment	Attainment
Coarse Particulate Matter (PM_{10})	Unclassifiable[b]	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	Attainment	**Nonattainment**[c]
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen sulfide	(No federal standard)	Unclassified
Visibility-reducing particles	(No federal standard)	Unclassified
Vinyl chloride	(No federal standard)	No designation

Source: SDAPCD 2024
Definitions: attainment = meets the standards; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify
Notes: O_3 = ozone; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide.

[a] The federal 1-hour standard of 0.12 parts per million was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.

[b] At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

[c] CARB has not reclassified the region to attainment yet due to (1) incomplete data and (2) the use of non-California Approved Samplers (CAS). Although data collected does meet the requirements for designation of attainment with federal $PM_{2.5}$ standards, the data completeness requirements for state $PM_{2.5}$ standards substantially exceed federal requirements and mandates, and have historically not been feasible for most air districts to adhere to given local resources. The Air Pollution Control District (APCD) has begun replacing most regional filter-based $PM_{2.5}$ monitors as they reach the end of their useful life with continuous $PM_{2.5}$ air

monitors to ensure collected data meets stringent completeness requirements in the future. APCD anticipates these new monitors will be approved as "CAS" monitors once CARB review the list of approved monitors, which has not been updated since 2013.

2.2.2.2 Toxic Air Contaminants

A TAC is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Federal laws use the term "hazardous air pollutants" to refer to the same types of compounds that are referred to as TACs under state law. California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588).

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. Pursuant to AB 2588, existing facilities that emit air pollutants above specified levels were required to (1) prepare a TAC emission inventory plan and report, (2) prepare a risk assessment if TAC emissions were significant, (3) notify the public of significant risk levels, and, (4) if health impacts were above specified levels, prepare and implement risk reduction measures.

The following regulatory measures pertain to the reduction of DPM and criteria pollutant emissions from off-road equipment and diesel-fueled vehicles.

Idling of Commercial Heavy-Duty Trucks (13 CCR 2485)

In July 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to control emissions from idling trucks. The ATCM prohibits idling for more than 5 minutes for all commercial trucks with a gross vehicle weight rating over 10,000 pounds. The ATCM contains an exception that allows trucks to idle while queuing or involved in operational activities.

In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.)

In July 2007, CARB adopted an ATCM for in-use off-road diesel vehicles. This regulation requires that specific fleet average requirements be met for NO_x emissions and for particulate matter emissions. Where average requirements cannot be met, best available control technology requirements apply. The regulation also includes several recordkeeping and reporting requirements.

In response to AB 8 2X, the regulations were revised in July 2009 (effective December 3, 2009) to allow a partial postponement of the compliance schedule in 2011 and 2012 for existing fleets. On December 17, 2010, CARB adopted additional revisions to further delay the deadlines reflecting reductions in diesel emissions due to the poor economy and overestimates of diesel emissions in California. The revisions delayed the first compliance date until no earlier than January 1, 2014, for large fleets, with final compliance by January 1, 2023. The compliance dates for medium fleets were delayed until an initial date of January 1, 2017, and final compliance date of January 1, 2023. The compliance dates for small fleets were delayed until an initial date of January 1, 2019, and final compliance date of January 1, 2028. Correspondingly, the fleet average targets were made more stringent in future compliance years. The revisions also accelerated the phase-out of older equipment with newer equipment added to existing large and medium fleets over time, requiring the addition of Tier 2 or higher engines starting on

March 1, 2011, with some exceptions: Tier 2 or higher engines on January 1, 2013, without exception; and Tier 3 or higher engines on January 1, 2018 (January 1, 2023, for small fleets).

On October 28, 2011 (effective December 14, 2011), the executive officer approved amendments to the regulation. The amendments included revisions to the applicability section and additions and revisions to the definition. The initial date for requiring the addition of Tier 2 or higher engines for large and medium fleets, with some exceptions, was revised to January 1, 2012. New provisions also allow for the removal of emission control devices for safety or visibility purposes. The regulation was also amended to combine the particulate matter and NO_x fleet average targets under one, instead of two, sections. The amended fleet average targets are based on the fleet's NO_x fleet average, and the previous section regarding particulate matter performance requirements was deleted completely. The best available control technology requirements, if a fleet cannot comply with the fleet average requirements, were restructured and clarified. Other amendments to the regulations included minor administrative changes to the regulatory text.

In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025)

On December 12, 2008, CARB adopted an ATCM to reduce NO_x and particulate matter emissions from most in-use on-road diesel trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. The original ATCM regulation required fleets of on-road trucks to limit their NO_x and particulate matter emissions through a combination of exhaust retrofit equipment and new vehicles. The regulation limited particulate matter emissions for most fleets by 2011 and limited NO_x emissions for most fleets by 2013. The regulation did not require any vehicle to be replaced before 2012 and never required all vehicles in a fleet be replaced.

In December 2009, the CARB Governing Board directed staff to evaluate amendments that would provide additional flexibility for fleets adversely affected by the struggling California economy. On December 17, 2010, CARB revised this ATCM to delay its implementation along with limited relaxation of its requirements. Starting on January 1, 2015, lighter trucks with a gross vehicle weight rating of 14,001 to 26,000 pounds with 20-year-old or older engines need to be replaced with newer trucks (2010 model year emissions equivalent as defined in the regulation). Trucks with a gross vehicle weight rating greater than 26,000 pounds with 1995 model year or older engines needed to be replaced as of January 1, 2015. Trucks with 1996 to 2006 model year engines must install a Level 3 (85% control) diesel particulate filter starting on January 1, 2012, to January 1, 2014, depending on the model year, and then must be replaced after 8 years. Trucks with 2007 to 2009 model year engines have no requirements until 2023, at which time they must be replaced with 2010 model year emissions-equivalent engines, as defined in the regulation. Trucks with 2010 model year engines would meet the final compliance requirements. The ATCM provides a phase-in option under which a fleet operator would equip a percentage of trucks in the fleet with diesel particulate filters, starting at 30% as of January 1, 2012, with 100% by January 1, 2016. Under each option, delayed compliance is granted to fleet operators who have or will comply with requirements before the required deadlines.

On September 19, 2011 (effective December 14, 2011), the executive officer approved amendments to the regulations, including revisions to the compliance schedule for vehicles with a gross vehicle weight rating of 26,000 pounds or less to clarify that all vehicles must be equipped with 2010 model year emissions equivalent engines by 2023. The amendments included revised and additional credits for fleets that have downsized; implemented early particulate matter retrofits; incorporated hybrid vehicles, alternative-fueled vehicles, and vehicles with heavy-duty pilot ignition engines; and implemented early addition of newer vehicles. The amendments included provisions for additional flexibility, such as for low-usage construction trucks, and revisions to previous exemptions, delays, and

extensions. Other amendments to the regulations included minor administrative changes to the regulatory text, such as recordkeeping and reporting requirements related to other revisions.

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

2.2.3 Local

2.2.3.1 San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The Proposed Project area is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

In the County, O_3 and particulate matter are the pollutants of main concern since exceedances of state ambient air quality standards for those pollutants have been observed in most years. For this reason, the SDAB has been designated as a nonattainment area for the state PM_{10}, $PM_{2.5}$, and O_3 standards. The SDAB is also a federal O_3 attainment (maintenance) area for 1997 8-hour O_3 standard, an O_3 nonattainment area for the 2008 8-hour O_3 standard, and a CO maintenance area (western and central part of the SDAB only, including the Proposed Project area).

2.2.3.2 Federal Attainment Plans

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The Proposed Project area is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

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Federal Attainment Plans

In December 2016, the SDAPCD adopted an update to the Eight-Hour Ozone Attainment Plan for San Diego County (2008 O_3 NAAQS), which indicated that local controls and state programs would allow the region to reach attainment of the federal 8-hour O_3 standard (1997 O_3 NAAQS) by 2018 (SDAPCD 2016). In this plan, SDAPCD relies on the

Regional Air Quality Strategy (RAQS) to demonstrate how the region will comply with the federal O_3 standard. The RAQS details how the region will manage and reduce O_3 precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these pollutants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

In January 2021, CARB submitted for EPA's consideration the revised California SIP. On July 12, 2021, the San Diego 2020 RAQS was found complete by EPA. As discussed in the 2020 RAQS, the results of modeling and weight of evidence analyses provide persuasive support to the conclusion that the emission control measures defined in the plan are sufficient to continue reducing O_3 concentrations throughout the County to the level of the 2008 O_3 NAAQS by the conclusion of the 2026 O_3 season, and to the level of the 2015 O_3 NAAQS by the conclusion of the 2032 O_3 season.

Currently, the County is designated as "moderate nonattainment" for the 2008 NAAQS and "maintenance" for the 1997 NAAQS. As documented in the 2016 Eight-Hour Ozone Attainment Plan for San Diego County, the County has a likely chance of obtaining attainment due to the transition to low-emission cars, stricter new source review rules, and the continuing requirement of general conformity for military growth and the San Diego International Airport. The County will also continue emission control measures, including ongoing implementation of existing regulations of O_3 precursor reduction for stationary and area-wide sources, subsequent inspections of facilities and sources, and the adoption of laws requiring best available retrofit control technology for control of emissions (SDAPCD 2016a).

2.2.3.3 State Attainment Plans

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The RAQS for the SDAB was initially adopted in 1991 and is updated triennially, most recently in 2022 (SDAPCD 2023). The RAQS was approved by the SDAPCD Board on March 9, 2023. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O_3. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to forecast future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans (SANDAG 2017a, 2017b).

In regard to particulate matter emissions-reduction efforts, in December 2005, the SDAPCD prepared a report titled Measures to Reduce Particulate Matter in San Diego County to address implementation of Senate Bill (SB) 656 in the County (SB 656 required additional controls to reduce ambient concentrations of PM_{10} and $PM_{2.5}$) (SDAPCD 2005). In the report, SDAPCD evaluated implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities, including earthmoving, demolition, and grading; bulk material storage and handling; carry-out and track-out removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust (SDAPCD 2005).

2.2.3.4 SDAPCD Rules and Regulations

As stated previously, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of the SDAPCD:

- **SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions.** Prohibits any activity causing air contaminant emissions darker than 20% opacity for more than an aggregate of 3 minutes in any consecutive 60-minute time period. In addition, Rule 50 prohibits any diesel pile-driving hammer activity causing air contaminant emissions for a period or periods aggregating more than 4 minutes during the driving of a single pile (SDAPCD 1997).
- **SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance.** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).
- **SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust.** Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009).
- **SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings.** Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2021).

2.2.3.5 San Diego Association of Governments

SANDAG is a regional planning agency for the incorporated and unincorporated areas of San Diego County on regional issues relating to transportation, the economy, community development, and the environment. SANDAG relatedly serves as the federally designated metropolitan planning organization for the County. With respect to air quality planning and other regional issues, SANDAG has prepared the 2021 Regional Plan for the San Diego region (SANDAG 2021). The Regional Plan combines the big-picture vision for how the region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

In regard to air quality, the Regional Plan sets the policy context in which SANDAG participates in, responds to the SDAPCD's air quality plans, and builds off the air district's air quality plan processes that are designed to meet health-based criteria pollutant standards in several ways (SANDAG 2021). First, it complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support technology-based control measures in air quality plans. Second, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On September 23, 2016, SANDAG's Board of Directors adopted the final 2016 Regional Transportation Improvement Program (RTIP), which is a multibillion-dollar, multi-year program of proposed major transportation projects in the San Diego region. Transportation projects funded with federal, state, and TransNet (the San Diego transportation sales tax program) must be included in an approved RTIP. Locally funded projects also may be programmed at the discretion of the agency. The 2016 RTIP covers 5 fiscal years and incrementally implements the Regional Plan (SANDAG 2016a). On February 26, 2021, the SANDAG Board of Directors adopted the final 2021 RTIP. The 2021 RTIP and its conformity determination were approved by Federal Highway Administration and Federal Transit Administration on April 16, 2021. The 2021 Regional Plan provides a long-term blueprint for the San Diego region that seeks to meet regulatory requirements, address traffic congestion, and create equal access to jobs, education, healthcare, and other community resources (SANDAG 2021). The plan is the result of years of planning, data analysis, and community engagement to reimagine the San Diego region with a transformative transportation system, a sustainable pattern of growth and development, and innovative demand and management strategies.

The 2021 Regional Plan includes an SCS, as required by California SB 375, for the San Diego region. This SCS describes coordinated transportation and land use planning that exceeds the state's target for reducing per capita GHG emissions set by CARB. The state-mandated target is a 19% reduction—compared with 2005—in per capita GHG emissions from cars and light-duty trucks by 2035. The 2021 Regional Plan achieves a 20% reduction by 2035.

The 2021 Regional Plan also puts forth a forecasted development pattern driven by regional goals for sustainability, mobility, housing affordability, and economic prosperity.

2.2.3.6 City of Oceanside General Plan

City of Oceanside General Plan

The City of Oceanside's General Plan includes various policies related to improving air quality (both directly and indirectly) in the Land Use Element (2002), Circulation Element (2012), and Energy Climate Action Element (City of Oceanside 2019a). Policies applicable to the Project include the following:

Land Use Element

Land Use Compatibility

Policy C. The use of land shall not subject people to potential sources of objectionable noise, light, odors, and other emissions nor to exposure of toxic, radioactive, or other dangerous materials.

Bicycle Facilities

Policy D. The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:

- Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.

- Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.

Pedestrian

Policy A. The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.

Circulation Element

Pedestrian Facilities

Goal 5. Support walking as a primary means of transportation that in turn supports transit and bike options. A positive walking environment is essential for supporting smart growth, mixed land uses, transit-oriented development, traffic calming and reducing traffic congestion and greenhouse gas emissions.

Energy Climate Action Element

Renewable Energy and Energy Efficiency

Policy ECAE-1c-1. Explore possible incentives for Leadership in Energy and Environmental Design (LEED)-certified and zero net energy (ZNE) development, including permit streamlining and fee reductions or waivers.

Policy ECAE-1c-7. As an alternative to natural gas, encourage building electrification, including electric heat pump appliances, space heaters, and water heaters.

Smart Growth and Multimodal Transportation

Policy ECAE-2a-2. In the City's commercial corridors, promote a mix of land uses that contributes to a sense of place, creates synergies between local businesses, and affords residents the opportunity to live, work, and play within a walkable radius.

2.3 Significance Criteria and Methodology

2.3.1 Thresholds of Significance

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), which provides guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.

4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether a project would have a significant impact on air quality. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of air quality impact assessments for permitted stationary sources. The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4 are exceeded.

Table 4. San Diego Air Pollution Control District Air Quality Significance Thresholds

Construction Emissions			
Pollutant	**Total Emissions (Pounds per Day)**		
Coarse particulate matter (PM_{10})	100		
Fine particulate matter ($PM_{2.5}$)	55		
Oxides of nitrogen (NO_x)	250		
Sulfur oxides (SO_x)	250		
Carbon monoxide (CO)	550		
Volatile organic compounds (VOCs)	75[a]		
Operational Emissions			
	Total Emissions		
Pollutant	**Pounds per Hour**	**Pounds per Day**	**Tons per Year**
Coarse particulate matter (PM_{10})	N/A	100	15
Fine particulate matter ($PM_{2.5}$)	N/A	55	10
Oxides of nitrogen (NO_x)	25	250	40
Sulfur oxides (SO_x)	25	250	40
Carbon monoxide (CO)	100	550	100
Lead and lead compounds	N/A	3.2	0.6
Volatile organic compounds (VOCs)	N/A	75[a]	13.7

Source: SDAPCD 2019.
Notes: NA = not applicable.
[a] VOC threshold based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance (County of San Diego 2007).

With respect to the third criterion, the SDAPCD specifically recommends consideration of sensitive receptors in locations such as day care centers, schools, retirement homes, and hospitals, or medical patients in residential homes close to major roadways or stationary sources, which could be impacted by air pollutants.

Finally, with respect to the fourth criterion (odors), SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of

any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

2.3.2 Approach and Methodology

2.3.2.1 Construction

Emissions from the construction phase of the Project for both the Pier View Way Bridges and Lifeguard Headquarters Phase and the Beachfront Facilities Phase were estimated using California Emissions Estimator Model (CalEEMod) Version 2022.1[3] (CAPCOA 2024).

The Project is proposed to be built out over two Phases. Separate runs within CalEEMod were performed to model each Phase. For all CalEEMod runs, construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Project Applicant and CalEEMod default values when Project specifics were not known.

For modeling purposes, it was assumed that construction of the Proposed Project would commence in September 2027[4] and would last approximately 74 months, ending in November 2033. The Project was assumed to be constructed in two Phases and based on the assumptions described herein (durations are approximate):

- **Pier View Way Bridges and Lifeguard Headquarters Phase:** September 2027-December 2029
- **Beachfront Facilities II Phase:** January 2030-November 2033

The estimated construction duration was provided by the Applicant. The equipment mix and on-road vehicle assumptions shown in Table 5 and Table 6 were based on CalEEMod default assumptions and applicant-provided input based on proposed land use and are meant to represent a reasonably conservative estimate of construction activity. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for a maximum of 8 hours per day, 5 days per week. The default CalEEMod trip distance for construction vehicles was assumed, which was a one-way distance of 11.97 miles for worker trips, 7.63 miles for vendor truck trips, and 20 miles for haul truck trips.

Construction would incorporate PDF-AQ-1, which would require advanced engine tiers for off-road equipment over 50 horsepower (hp). Construction would also be subject to SDAPCD Rule 55, Fugitive Dust Control, which requires that proposed construction include steps to restrict visible emissions of fugitive dust beyond the property line (SDAPCD 2009). Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during proposed grading and construction activities. In accordance with SDAPCD Rule 55, SDSU shall water during dust-generating activities at least twice per day. Additionally, in accordance with SDAPCD Rule 67.0.1, the contractor

[3] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to calculate construction and operational emissions from land use development Projects. The model was developed for the California Air Pollution Control Officers Association in collaboration with multiple air districts across the state. Numerous lead agencies in the state, including the SDAPCD, use CalEEMod to estimate air pollutant emissions in accordance with CEQA Guidelines Section 15064.4(a)(1).

[4] The analysis assumes a construction start date of September 2027, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

shall use architectural coatings that do not exceed 50 grams per liter for interior and exterior applications and 100 grams per liter for paving applications.

Pier View Way Bridges and Lifeguard Headquarters Phase

Based on information provided by the Applicant, it was assumed that construction of the Pier View Way Bridges and Lifeguard Headquarters Phase would begin in September 2027 and would last approximately 18 months. The construction schedule was developed based on available information provided by the Project applicant, typical construction practices, and CalEEMod default assumptions. Construction phasing is intended to represent a schedule of anticipated activities for use in estimating potential Project-generated construction emissions. The approximate construction phasing is as follows:

- Demolition: September 2027 to October 2027
- Rocks & Riprap Removal: September 2027 to October 2027
- Grading – Restore Beach Access: October 2027 to December 2027
- New Pier and Building Construction: December 2027 to December 2028
- Paving: December 2028 to January 2029
- Architectural Coating: December 2028 to January 2029

Table 5 provides the construction equipment mix and vehicle trips assumed for estimating Phase-generated construction emissions.

Table 5. Pier View Way Bridges and Lifeguard Headquarters Phase - Construction Scenario Assumptions

Construction Phase (Duration)	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
Demolition	54	2	10	Rubber-Tired Dozers	1	8
				Concrete/Industrial Saws	6	8
				Tractors/Loaders/Backhoes	1	8
				Air Compressors	8	8
				Cranes	1	8
				Rough Terrain Forklifts	1	8
				Generator Sets	2	8
				Excavators	1	8
Site Preparation – Rock/Riprap Removal	6	2	10	Tractors/Loaders/Backhoes	1	8
				Rubber-Tired Dozers	1	8
Grading – Restore Beach Access	10	0	18	Graders	1	8
				Tractors/Loaders/Backhoes	1	8
				Rubber-Tired Dozers	1	8

Table 5. Pier View Way Bridges and Lifeguard Headquarters Phase - Construction Scenario Assumptions

Construction Phase (Duration)	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
				Excavators	1	8
New Pier and Building Construction	20	2	0	Cranes	1	8
				Forklifts	1	8
				Generator Sets	2	8
				Welders	4	8
				Tractors/Loaders/Backhoes	1	4
				Other Construction Equipment (Pile Drivers)	1	8
				Skid Steer Loaders	1	8
				Pumps	4	8
Paving	10	2	0	Cement and Mortar Mixers	1	8
				Pavers	1	8
				Paving Equipment	1	8
				Rollers	1	8
Architectural Coating	10	2	0	Air Compressors	4	8

Note: See Attachment A, CalEEMod Outputs and Estimated Emissions, for additional details.

Based on Project-specific information, construction of the Pier View Way Bridges and Lifeguard Headquarters Phase would include the demolition of existing buildings and pier structure and the material movement from grading of the site and riprap removal. Approximately 20,609 square feet of building debris would be demolished, requiring a total of 256 one-way haul truck trips.

Additionally, during the grading phase, approximately 1,000 cubic yards of soils would be imported to the site and 5,400 cubic yards of soils would be exported, requiring a total of 676 one-way haul truck trips. Lastly, site prep would include the removal of rock/riprap, which would result in 1,126 cubic yards of material export and require 144 one-way haul truck trips.

Beachfront Facilities Phase

The Beachfront Facilities Phase would occur after completion of the Pier View Way Bridges and Lifeguard Headquarters Phase and would last approximately 57 months. The Beachfront Facilities Phase would include the construction of the JSBCC, followed by construction of the Amphitheater and Bandshell, with each project containing its own schedule and equipment list. The combined construction schedule was developed based on available information provided by the Project applicant, typical construction practices, and CalEEMod default assumptions. Construction phasing is intended to represent a schedule of anticipated activities for use in estimating potential Project-generated construction emissions. The approximate construction phasing is as follows:

Junior Seau Beach Community Center:

- Demolition: February 2029 to March 2029
- Site Preparation: March 2029 to May 2029
- Grading/Earthwork: May 2029 to August 2029
- New Construction: August 2029 to October 2030
- Paving - Landscape and Site Construction: October 2030 to December 2030
- Architectural Coating/Finish: December 2030 to December 2030

Junior Seau Amphitheater and Bandshell:

- Demolition: January 2031 to March 2031
- Site Preparation: March 2031 to June 2031
- Grading/Earthwork: June 2031 to September 2031
- New Construction: September 2031 to July 2033
- Paving - Landscape and Site Construction: July 2033 to October 2033
- Architectural Coating/Finish: October 2033 to November 2033

Table 6 provides the construction equipment mix and vehicle trips assumed for estimating Phase-generated construction emissions.

Table 6. Beachfront Facilities Phase - Construction Scenario Assumptions

Construction Phase (Duration)	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
JSBCC Construction						
Demolition	20	8	2	Concrete/Industrial Saws	2	8
				Air Compressors	2	8
				Rough Terrain Forklifts	1	8
				Rubber-Tired Dozers	1	8
				Tractors/Loaders/Backhoes	1	8
				Generator Sets	2	8
				Crushing/Proc. Equipment	1	8
				Excavators	1	8
Site Preparation	20	8	0	Tractors/Loaders/Backhoes	1	8
				Rubber-Tired Dozers	1	8
Grading/ Earthwork	20	8	2	Graders	1	8
				Excavators	1	8
				Scrapers	1	8
				Tractors/Loaders/Backhoes	1	8

Table 6. Beachfront Facilities Phase - Construction Scenario Assumptions

Construction Phase (Duration)	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
				Rubber-Tired Dozers	1	8
New Construction	36	18	0	Forklifts	1	8
				Tractors/Loaders/Backhoes	1	8
				Generator Sets	2	8
				Skid Steer Loaders	1	8
				Pumps	1	8
				Welders	1	8
Paving - Landscape and Site Construction	16	8	0	Cement and Mortar Mixers	1	8
				Pavers	1	8
				Rollers	1	8
				Paving Equipment	1	8
Architectural Coating / Finishing	10	6	0	Air Compressors	3	8
Amphitheater and Bandshell Construction						
Demolition	26	10	2	Concrete/Industrial Saws	4	8
				Air Compressors	2	8
				Rough Terrain Forklifts	1	8
				Rubber-Tired Dozers	1	8
				Tractors/Loaders/Backhoes	1	8
				Generator Sets	2	8
				Excavators	1	8
Site Preparation	30	16	0	Tractors/Loaders/Backhoes	1	8
				Rubber-Tired Dozers	1	8
Grading/ Earthwork	30	16	4	Graders	1	8
				Excavators	1	8
				Scrapers	1	8
				Tractors/Loaders/Backhoes	1	8
				Rubber-Tired Dozers	1	8
New Construction	60	30	0	Forklifts	2	8
				Tractors/Loaders/Backhoes	2	8
				Generator Sets	5	8
				Skid Steer Loaders	5	8
				Pumps	5	8
				Welders	1	8
	30	16	0	Cement and Mortar Mixers	5	8

Table 6. Beachfront Facilities Phase - Construction Scenario Assumptions

Construction Phase (Duration)	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Daily Usage Hours
Paving - Landscape and Site Construction				Pavers	5	8
				Rollers	5	8
				Paving Equipment	2	8
Architectural Coating / Finishing	26	12	0	Air Compressors	10	8

Note: See Attachment A, CalEEMod Outputs and Estimated Emissions, for additional details.

For the analysis, it was assumed that heavy-duty construction equipment would be operating 5 days per week (22 days per month) during Proposed Project construction. Construction worker and vendor trips were based on CalEEMod default assumptions and rounded up to the nearest whole number to account for whole round trips. A detailed depiction of the construction schedule—including information regarding phases and equipment used during each phase—is included in Attachment A, CalEEMod Outputs and Estimated Emissions, of this report. The information contained in Attachment A was used as CalEEMod model inputs.

Based on Project-specific information, demolition and grading would occur with respect to both components of the Beachfront Facilities Phase.

During the JSBCC renovation, approximately 8,706 square feet of combined asphalt and concrete would be demolished. Additionally, approximately 4,279 square feet of building would be demolished from the interior of the building, including walls and partitions. The building debris, together with the asphalt and concrete demolition, would total 315 tons of debris, resulting in 32 one-way haul truck trips for export of material off site. During the grading phase, approximately 132 cubic yards of material would be imported to the site, and 844 cubic yards of material would be exported, requiring a total of 92 one-way haul truck trips for export of material off site.

The amphitheater and bandstand reconstruction would result in 35,965 square feet of concrete demolition and 12,657 square feet of building demolition, together totaling 938 tons of material debris, resulting in 96 one-way haul truck trips for export of material off site. During the grading phase, approximately 94 cubic yards of material would be imported to the site, and 5,037 cubic yards would be exported, requiring a total of 200 one-way haul truck trips for export of material off site.

2.3.2.2 Operation

Operation of the Project would generate criteria air pollutant emissions from mobile, area, and energy sources, which were estimated using CalEEMod. As with construction, separate CalEEMod runs were performed for each Project Phase. It was assumed that the Pier View Way Bridges and Lifeguard Headquarters Phase would be fully operational in 2029, and the Beachfront Facilities Phase would be operational in 2034.

Emissions from the existing land uses (Existing Scenario) were also estimated using CalEEMod to compare with the Project scenario to present the net change in criteria air pollutant emissions. Operational year 2024 was assumed for the Existing Scenario.

Details regarding the sources of criteria air pollutant emissions are discussed below.

Area

CalEEMod was used to estimate operational emissions from area sources, including emissions from hearths, consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating were calculated in the building energy use module of CalEEMod, as described in the following text.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2022). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of nonresidential and residential buildings and on the default factor of pounds of VOC per building square foot per day. For the asphalt surface land uses, CalEEMod estimates VOC emissions associated with use of parking surface degreasers based on the square footage of parking surface area and pounds of VOC per square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential and residential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The CalEEMod default VOC emission factors were used for building interior, exterior, and parking area coatings. The model default reapplication rate of 10% of area per year was assumed.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For San Diego County, the average annual “summer” days are estimated to 365 days; however, operational days are assumed to be 180 days per year in CalEEMod (CAPCOA 2022).

A summary of key modeling assumptions for each operational run is provided below:

- Existing Scenario. Default CalEEMod values were applied.
- Pier View Way Bridges and Lifeguard Headquarters Phase. Default CalEEMod values were applied.
- Beachfront Facilities Phase. Default CalEEMod values were applied.

Mobile Sources (Motor Vehicles)

Following completion of construction activities, the Project would generate criteria air pollutant emissions from mobile sources (vehicular traffic). For modeling purposes, only the net vehicle trips between the Project scenario

and the existing scenario were considered. Compared to the existing scenario, the Project would generate additional trips from the expansion of lifeguard operations, which includes the increased accommodation of staff from 35 staff per day to 54 staff per day, according to the Feasibility Study for the Project. For modeling purposes, this growth in lifeguard operations was represented by an increase of 38 worker trips per day, as well as an additional 2 trips per day for other work-related trips that would be likely to occur (i.e., delivery trips). Worker trip length was assumed to be 13.7 miles, consistent with the SANDAG forecast for the region (SANDAG 2016b); trip length for delivery trips was assumed to be 16.4 miles, consistent with the CalEEMod default assumption for the Project location. CalEEMod default data, including vehicle mix, trip characteristics and emissions factors, were used for the other model inputs.

Energy

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, because criteria pollutant emissions occur at the site of the power plant, which is typically off site. Therefore, for the purposes of the air quality analysis, the energy source parameters focus on criteria air pollutants generated because of natural gas consumption within the built environment. Natural gas consumption is attributed to systems like heating, ventilation, and air conditioning, and water heating. In CalEEMod 2022.1, the default energy use from nonresidential land uses is based on 2019 consumption estimates from the California Energy Commission's (CEC) 2018–2030 Uncalibrated Commercial Sector Forecast (Commercial Forecast). The Commercial Forecast dataset derives energy intensities of different end use categories for different land use subtypes for electricity demand forecast zones throughout California. However, the energy use estimates are based on existing buildings and are not representative of those constructed in compliance with energy efficiency requirements of the latest Title 24 Building Energy Efficiency Standards. Therefore, per Appendix D, Technical Source Documentation for Emissions Calculations, of the CalEEMod Version 2022.1 User Guide, "the default energy consumption estimates provided in CalEEMod based on the Commercial Forecast is very conservative, overestimating expected energy use compared to what would be expected for new buildings subject to the latest Energy Code with more stringent energy efficiency measures" (CAPCOA 2022).

For additional details see Attachment A, CalEEMod Outputs and Estimated Emissions.

A summary of key modeling assumptions for each operational run is provided below:

- Existing Scenario. In the absence of Project-specific data, default CalEEMod values were applied.
- Pier View Way Bridges and Lifeguard Headquarters Phase. In the absence of Project-specific data, default CalEEMod values were applied.
- Beachfront Facilities Phase. Applicant-provided Project-specific data for the anticipated energy demand were utilized in place of CalEEMod default values. Land uses would not require natural gas for operations.

2.4 Impact Analysis

2.4.1 Would the Project Conflict with Or Obstruct Implementation of The Applicable Air Quality Plan?

2.4.1.1 Analysis

As stated in Section 2.2.3, Local Regulations, the SDAPCD is responsible for developing and implementing the clean air plans for attainment and maintenance of the NAAQS and CAAQS in the SDAB; specifically, the SIP and RAQS.[5] The federal O_3 attainment plan, which is part of the SIP, was adopted in 2020. The SIP includes a demonstration that current strategies and tactics will attain acceptable air quality in the SDAB based on the NAAQS. The RAQS was initially adopted in 1992 and is updated every 3 years (most recently in 2022). The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O_3. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

Projects involving development consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS. However, if a project involves development that is greater than that anticipated in the local plan and/or SANDAG's growth projections, that project might conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

The Pier View Way Bridges and Lifeguard Headquarters Phase consists of renovations to the existing Pier View Way Bridges and the reconfiguration and expansion of lifeguard operations buildings. The Beachfront Facilities Phase consists of varying reconstructions and renovations to the Junior Seau Beach Community Center and Junior Seau Amphitheater and Bandshell. While the Proposed Project would accommodate the expansion of lifeguard operations, the Project itself is not growth-inducing, as the demand for the expansion of operations facilities already exists. Moreover, the Project does not include housing and would not bring more people to the region. Therefore, the Project would be within the regional growth projections and would not conflict with the RAQS and SIP. Therefore, a **less than significant** impact would result.

2.4.1.2 Conclusion

The Project is not anticipated to result in air quality impacts that were not envisioned in the growth projections and RAQS, nor would it obstruct or impede implementation of local air quality plans. Based on the analysis above, implementation of the Project would not result in development in excess of that anticipated in local plans or increases in population/housing growth beyond those contemplated by SANDAG. As such, the nominal increase in vehicle trip generation and small increases to existing development for the Project are considered to be anticipated in the SIP and RAQS. Because the proposed land uses and associated vehicle trips are anticipated in local air quality

[5] For the purpose of this discussion, the relevant federal air quality plan is the O_3 attainment plan (SDAPCD 2020). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the SDAB.

plans, the Project would be consistent at a regional level with the underlying growth forecasts in the RAQS. Impacts would be **less than significant**.

2.4.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SDAPCD develops and implements plans for future attainment of the NAAQS and CAAQS. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether the Project's individual emissions would have a cumulatively significant impact on air quality.

2.4.2.1 Construction

Construction of the proposed Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (vendor and haul truck trips, and worker vehicle trips). Construction emissions can vary substantially from day to day depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions.

Criteria air pollutant emissions associated with construction activities were quantified using CalEEMod. As discussed in Section 2.3.2, Approach and Methodology, separate CalEEMod runs were performed for each Project Phase. Default values provided by CalEEMod were used where detailed Project information was not available. Detailed depictions of the construction schedule for each Project Phase—including information regarding phasing, equipment used, haul trucks, vendor trucks, and worker vehicles—is included in Section 2.3.2.

Development of the proposed Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, and architectural coatings. As described previously, fugitive dust would be limited through compliance with SDAPCD Rule 55, which requires the restriction of visible emissions of fugitive dust beyond the property line. Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) generated during grading and construction activities. To account for dust control measures in the calculations, the Proposed Project would be required to ensure that active sites be watered two times daily, depending on weather conditions. as a matter of SDAPCD Rule 55 regulatory compliance.

Exhaust from internal combustion engines used by construction equipment and vehicles would result in emissions of VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$. The application of asphalt pavement and architectural coatings would also produce VOC emissions.

Table 7 and Table 8 show the estimated maximum daily construction emissions associated with the conceptual construction phases of each Project Phase. "Summer" emissions are representative of the conditions that may occur during the O_3 season (May 1 through October 31), and "winter" emissions are representative of the conditions that may occur during the balance of the year (November 1 through April 30). Complete details of the emissions calculations are provided in Attachment A.

Table 7. Pier View Way Bridges and Lifeguard Headquarters Phase - Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2027	3.18	24.31	53.10	0.09	6.13	2.39
2028	1.39	11.18	21.97	0.04	0.47	0.31
Winter						
2027	3.17	24.41	52.81	0.09	6.13	2.39
2028	1.91	11.19	21.87	0.04	0.47	0.31
2029	1.88	5.96	12.24	0.02	0.32	0.16
Maximum Daily Emissions (Project)	**3.18**	**24.41**	**53.10**	**0.09**	**6.13**	**2.39**
SDAPCD threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; EIR = Environmental Impact Report; SDAPCD = San Diego Air Pollution Control District.
See Attachment A, CalEEMod Outputs and Estimated Emissions, for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect and account for the incorporation of PDF-AQ-1 and the required compliance with SDAPCD Rule 55 (Fugitive Dust) and Rule 67.0.1 (Architectural Coatings).

Table 8. Beachfront Facilities Phase – Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2029	0.63	5.44	23.95	0.04	3.53	1.54
2030	0.62	5.40	9.35	0.02	0.54	0.21
2031	1.50	15.72	24.32	0.04	3.70	1.59
2032	1.48	15.68	22.73	0.04	1.02	0.47
2033	1.47	15.62	22.74	0.04	1.02	0.47
Winter						
2029	35.03	9.56	68.79	0.04	2.81	1.40
2030	4.95	5.43	9.20	0.02	0.54	0.21
2031	1.48	15.77	24.36	0.04	2.96	1.45
2032	1.47	15.71	22.52	0.04	1.02	0.47
2033	5.76	15.66	22.64	0.04	1.02	0.47
Maximum Daily Emissions (Project)	**35.03**	**15.77**	**68.79**	**0.04**	**3.70**	**1.54**
SDAPCD threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; EIR = Environmental Impact Report; SDAPCD = San Diego Air Pollution

Control District.
See Attachment A, CalEEMod Outputs and Estimated Emissions, for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect and account for the incorporation of PDF-AQ-1 and the required compliance with SDAPCD Rule 55 (Fugitive Dust) and Rule 67.0.1 (Architectural Coatings).

As shown in Table 7 and Table 8, daily construction emissions for the Project would not exceed SDAPCD's significance thresholds for any criteria air pollutants. Therefore, the Project would result in a **less-than-significant** impact related to emissions of criteria air pollutants during construction.

2.4.2.2 Operations

Operation of the Project would generate criteria air pollutant emissions from mobile sources (vehicle trips), area sources (consumer products, landscape maintenance equipment), and energy sources. As discussed in Section 2.3.2, pollutant emissions associated with long-term operations were quantified using CalEEMod. Project-generated mobile source emissions were estimated in CalEEMod based on Project-specific trip rates. CalEEMod default values were used to estimate emissions from the Project and from area sources and energy sources.

Table 9 presents the maximum daily emissions associated with operation of the Pier View Way Bridges and Lifeguard Headquarters Phase in 2029 after all phases of construction have been completed. Complete details of the emissions calculations are provided in Attachment A.

Table 9. Pier View Way Bridges and Lifeguard Headquarters Phase – Estimated Maximum Daily Operation Criteria Air Pollutant Emissions

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Mobile	0.16	0.13	1.54	<0.01	0.39	0.10
Area	0.21	<0.01	0.31	<0.01	<0.01	<0.01
Energy	<0.01	0.08	0.07	<0.01	0.01	0.01
Total Daily Summer Emissions	**0.38**	**0.22**	**1.91**	**<0.01**	**0.40**	**0.11**
Winter						
Mobile	0.16	0.15	1.41	<0.01	0.39	0.10
Area	0.16	0.00	0.00	0.00	0.00	0.00
Energy	<0.01	0.08	0.07	<0.01	0.01	0.01
Total Daily Winter Emissions	**0.33**	**0.23**	**1.48**	**<0.01**	**0.40**	**0.11**
Maximum Daily Emissions (Phase)	**0.38**	**0.23**	**1.91**	**<0.01**	**0.40**	**0.11**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; EIR = Environmental Impact Report; SDAPCD = San Diego Air Pollution Control District; <0.01 = reported value less than 0.01.
See Attachment A, CalEEMod Outputs and Estimated Emissions, for complete results.
[1] Project net mobile source emissions are represented under the Pier View Way Bridges and Lifeguard Headquarters Phase. Refer to Section 2.3.2.2 for detailed explanation of mobile source emissions.

Table 10 presents the maximum daily emissions associated with operation of the Beachfront Facilities Phase in 2034 after all phases of construction have been completed. Complete details of the emissions calculations are provided in Attachment A.

Table 10. Beachfront Facilities Phase – Estimated Maximum Daily Operation Criteria Air Pollutant Emissions

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Mobile[1]	-	-	-	-	-	-
Area	1.04	0.01	1.51	<0.01	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Total Daily Summer Emissions	**1.04**	**0.01**	**1.51**	**<0.01**	**<0.01**	**<0.01**
Winter						
Mobile[1]	-	-	-	-	-	-
Area	0.79	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Total Daily Winter Emissions	**0.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Maximum Daily Emissions (Phase)	**1.04**	**0.01**	**1.51**	**<0.01**	**<0.01**	**<0.01**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; EIR = Environmental Impact Report; SDAPCD = San Diego Air Pollution Control District; <0.01 = reported value less than 0.01.
See Attachment A, CalEEMod Outputs and Estimated Emissions, for complete results.
[1] Project net mobile source emissions are represented under the Pier View Way Bridges and Lifeguard Headquarters Phase. Refer to Section 2.3.2.2 for detailed explanation of mobile source emissions.

Furthermore, operation of the Pier View Way Bridges and Lifeguard Headquarters Phase would overlap with the construction of the Beachfront Facilities Phase, so the emissions during this interim operational period would be higher when accounting for this overlap. Therefore, a separate quantification of this overlap is shown in Table 11 below and would be representative of Project emissions. These combined emissions during the interim operational scenario are compared to those during the existing scenario for a net emission analysis.

Table 11. Project Combined Maximum Daily Operation and Construction Criteria Air Pollutant Emissions Compared to Existing Scenario

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Existing Scenario	*1.04*	*0.39*	*1.80*	*<0.01*	*0.03*	*0.03*
Pier View Way Bridges and Lifeguard Headquarters Phase Operation Emissions	0.38	0.23	1.91	<0.01	0.40	0.11
Beachfront Facilities Phase Construction Emissions	35.03	15.77	68.79	0.04	3.70	1.54
Project Combined Total	*35.41*	*16.00*	*70.70*	*0.04*	*4.10*	*1.70*

Table 11. Project Combined Maximum Daily Operation and Construction Criteria Air Pollutant Emissions Compared to Existing Scenario

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Project Net Change (Project-Existing)	**34.37**	**15.61**	**68.90**	**0.04**	**4.07**	**1.67**
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; EIR = Environmental Impact Report; SDAPCD = San Diego Air Pollution Control District; <0.01 = reported value less than 0.01.
See Attachment A for complete results.
Construction emissions reflect and account for the incorporation of PDF-AQ-1 and the required compliance with SDAPCD Rule 55 (Fugitive Dust) and Rule 67.0.1 (Architectural Coatings).

As shown in Table 11, the net daily emissions for the interim operational phase that includes the operation of the Pier View Way Bridges and Lifeguard Headquarters Phase and the construction of the Beachfront Facilities Phase would also not exceed SDAPCD's significance thresholds for any criteria air pollutant. Impacts during operation would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Finally, Table 12 summarizes the net analysis comparing Project criteria air pollutant emissions at buildout of both Project Phases, compared to the existing scenario.

Table 12. Project Estimated Maximum Daily Operation Criteria Air Pollutant Emissions Compared to Existing Scenario

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Existing Scenario	1.04	0.39	1.80	<0.01	0.03	0.03
Pier View Way Bridges and Lifeguard Headquarters Phase	0.38	0.23	1.91	<0.01	0.40	0.11
Beachfront Facilities Phase	1.04	0.01	1.51	<0.01	<0.01	<0.01
Project Total	1.42	0.24	3.42	<0.01	0.40	0.11
Project Net Change (Project-Existing)	**0.38**	**(0.15)**	**1.62**	**<0.01**	**0.37**	**0.08**
SDAPCD Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; EIR = Environmental Impact Report; SDAPCD = San Diego Air Pollution Control District; <0.01 = reported value less than 0.01. Values in parentheses represent negative numbers.
See Attachment A for complete results.
[1] Project net mobile source emissions are represented under the Pier View Way Bridges and Lifeguard Headquarters Phase. Refer to Section 2.3.2.2 for detailed explanation of mobile source emissions.

As shown in Table 12, the net daily operational emissions for the Project would not exceed SDAPCD's significance thresholds for any criteria air pollutant. Impacts during operation would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be **less than significant**.

2.4.2.3 Conclusion

In analyzing cumulative impacts from a Project, the analysis must specifically evaluate the Project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If the Project does not exceed thresholds and is determined to have less-than-significant Project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the Project components, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, the Project would only be considered to have a significant cumulative impact if its contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

Cumulative projects in the Project area would not result in substantial concentrations of TAC emissions during operation as they are predominantly residential and commercial projects with the majority of their emissions (mobile sources) occurring off site. Emissions during construction would disperse rapidly from the project sites and generally occur at magnitudes that would not affect substantial numbers of people.

Additionally, for the SDAB, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions within the SDAB to ensure that the SDAB continues to make progress toward NAAQS and CAAQS attainment status. As such, cumulative projects in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents on which the RAQS is based would have the potential to result in cumulative impacts if they represent development beyond regional projections.

The SDAB has been designated as a federal nonattainment area for O_3 and a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the SDAB. As shown in Tables 7 and 8, as well as Table 11, the emissions of all criteria pollutants from the Project's construction and net emissions from the Project's operations would be below the applicable significance levels without mitigation. As such, the Project would result in less-than-significant impacts to air quality.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the County as part of development of their general plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS, and would not result in cumulatively considerable impacts from operational emissions. As discussed in Section 2.4.1 of this report, the Project is consistent with SANDAG growth projections. Thus, the Project would be consistent at a regional level with the underlying growth forecasts in the SIP and RAQS.

In light of the above, the Proposed Project would not result in a cumulatively considerable contribution to pollutant emissions. Cumulative impacts would be **less than significant** during construction and operation.

2.4.3 Would the Project Expose Sensitive Receptors to Substantial Pollutant Concentrations?

2.4.3.1 Carbon Monoxide Hotspots

Mobile-source (vehicular) CO impacts occur regionally and locally. As previously discussed in Section 2.3.2.2, the Project's vehicle trip generation would be a marginal increase compared to the existing scenario due to the increase in worker trips associated with the expansion of lifeguard staff. Therefore, project-related travel would not exacerbate regional traffic impacts within the local airshed and the SDAB. Locally, project-related traffic would be nominal and can be reasonably considered to be a negligible change to the City's roadway system. With this said, if traffic were to occur during periods of poor atmospheric ventilation, consist of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operate on roadways already crowded with non-Project traffic, there would be a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SDAB is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the Proposed Project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. As discussed earlier in this section, the Proposed Project would result in a net reduction in daily trips associated with the students. Therefore, there would not be anticipated to be a reduction in level of service in intersections around the Project site. As such, a CO hotspot analysis is not needed, and the Proposed Project would have a **less than significant impact**.

2.4.3.2 Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute (immediate) and/or chronic (cumulative) non-cancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere.

Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Project construction would result in emissions of diesel particulate matter (DPM) from heavy construction equipment and trucks accessing the site. DPM is characterized as a TAC by the State of California. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal

program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and has adopted appropriate control measures for sources of these TACs. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-use Off-road Diesel Vehicles (13 CCR 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.

- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

Project construction would result in emissions of DPM from heavy construction equipment and trucks accessing the site. DPM is characterized as a TAC by the State of California. The Office of Environmental Health Hazard Assessment (OEHHA) has identified carcinogenic and chronic noncarcinogenic effects from long-term exposure, but has not identified health effects due to short-term exposure to diesel exhaust. According to OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the Project (OEHHA 2015). After proposed construction is completed, there would be no long-term source of TAC emissions during operation. In addition, the Project would incorporate PDF-AQ-1, which would reduce DPM emissions through advanced engine tier requirements during construction. Furthermore, as shown in Table 7 and 8, maximum daily particulate matter (i.e., PM_{10} or $PM_{2.5}$) emissions generated by construction equipment operation and haul-truck trips during construction (exhaust particulate matter or DPM), combined with fugitive dust generated by equipment operation and vehicle travel, is minimal. The duration of proposed construction activities would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs.

The Project is located close to sensitive receptors (residences) adjacent to the north and east of the site across Pacific Street. Emissions during construction would not be concentrated in one area of the site but would be spread over the entirety of the site. Emissions would not be continuous during construction hours and would cease once construction is complete. Furthermore, the incorporation of PDF-AQ-1 would reduce TAC emissions associated with off-road equipment use. Therefore, the Project would not expose sensitive receptors to substantial quantities of TACs during construction. Impacts would be less than significant.

No residual TAC emissions and corresponding health risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the Project. CARB has published the Air Quality and Land Use Handbook: A Community Health Perspective (CARB 2005), which identifies certain types of facilities or sources that may emit substantial quantities of TACs and therefore could conflict with sensitive land uses, such as "schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities." The Air Quality and Land Use Handbook is a guide for siting of new sensitive land uses, and CARB recommends that sensitive receptors not be located downwind or in proximity to such sources to avoid potential health hazards. The enumerated facilities or sources include the following: high-traffic freeways and roads, distribution centers, railyards, ports, refineries, chrome plating facilities, dry cleaners, and large gas-dispensing facilities. The Project would not include any of the above-listed land uses associated with generation of TAC emissions. The Project may emit DPM emissions during operation from mobile sources. However, as shown in Table

9 and 10, maximum daily particulate matter emissions are minimal. Potential impacts associated with exposure of sensitive receptors to TACs would be less than significant.

It is expected that operation of the Project would not result in any non-permitted direct emissions (e.g., those from a point source such as diesel generators) that could be a TAC source. Therefore, the Project would not result in exposure of sensitive receptors in the vicinity of the Project site to substantial TAC concentrations due to either construction or operation, and impacts would be less than significant.

Therefore, the Project would not expose sensitive receptors to substantial quantities of TACs during construction or operation. Impacts would be **less than significant**.

2.4.3.3 Health Effects of Criteria Air Pollutants

As shown above, construction and operation of the Proposed Project would not result in emissions that exceed the SDAPCD's emission thresholds for any criteria air pollutants. The SDAPCD emission thresholds were developed to show levels at which a project would not prevent or interfere with the attainment or maintenance of an ambient air quality standard. As the ambient air quality standards define the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health, by not exceeding the SDAPCD emission thresholds, the project would not be causing harm to public health. Regarding VOCs, some VOCs are associated with motor vehicles and construction equipment, while others are associated with architectural coatings, the emissions of which would not result in the exceedances of the SDAPCD's thresholds. Generally, the VOCs in architectural coatings are of relatively low toxicity. Additionally, SDAPCD Rule 67.0.1 restricts the VOC content of coatings for both construction and operational applications.

Regarding VOCs and NO_x, these pollutants are precursors to O_3, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by EPA as a nonattainment area for the 8-hour O_3 NAAQS and CAAQs standards and the 8-hour CAAQS standard). The health effects associated with O_3, as discussed in Section 2.1.3, Pollutants and Effects, are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the O_3 ambient air quality standards tend to occur between April and October when solar radiation is highest.

Regarding NO_2, according to the construction emissions analysis, construction of the Proposed Project would not contribute to exceedances of the NAAQS and CAAQS for NO_2. As described in Section 2.1.3, health impacts from exposure to NO_2 and NO_x are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, these heaviest increments of use would be intermittent during the Project's construction period. Additionally, off-road construction equipment would operate at various portions of the site and would not be concentrated in one portion of the site at any one time. Construction of the Proposed Project also would not require any stationary emission sources that would create substantial, localized NO_x impacts.

In summary, the Proposed Project's VOC and NO_x emissions, as described previously, would minimally contribute to regional O_3 concentrations and its associated health effects. In addition to O_3, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO_2. As shown in Table 3, the existing NO_2 concentrations

in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected that the Proposed Project's operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO "hotspots" were discussed previously as a less-than-significant impact. Thus, the Proposed Project's CO emissions would not contribute to significant health effects associated with this pollutant. Likewise, PM_{10} and $PM_{2.5}$ would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter, would not obstruct the SDAB from coming into attainment for these pollutants, and would not contribute to significant health effects associated with particulates.

Based on the preceding considerations, health impacts associated with criteria air pollutants would be **less than significant**.

2.4.3.4 Valley Fever

As discussed in Section 2.1.3.2, valley fever is not highly endemic to San Diego County, and the incidence rate in the Project area is below the County average and the statewide average. Construction of the Proposed Project would comply with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction. Strategies the Project would implement to comply with SDAPCD Rule 55 and control dust include watering two times per day, depending on weather conditions, and limiting speed on unpaved roads to 15 mph. Based on the low incidence rate of Coccidioidomycosis in the Project area and in greater San Diego County, as well as the Proposed Project's implementation of dust control strategies, it is not anticipated that earth-moving activities during Proposed Project construction would result in exposure of nearby sensitive receptors to valley fever. During operation, there would be no ground disturbance or grading to generate fugitive dust. Therefore, the Proposed Project would have a **less–than-significant impact** with respect to valley fever exposure for sensitive receptors.

2.4.3.5 Conclusion

Based on the preceding discussion, the Project would not expose sensitive receptors to substantial quantities of TACs during construction or operation. Impacts would be **less than significant**.

Valley Fever exposure was also determined to be **less than significant** for the Project.

In addition, VOC and NO_x emissions, as described previously, would minimally contribute to regional O_3 concentrations and the associated health effects. In addition to O_3, NO_x emissions would not contribute to potential exceedances of the NAAQS or CAAQS for NO_2. As shown in Table 3, Local Ambient Air Quality Data, the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected that the Project's operational NO_x emissions would result in exceedances of the NO_2 standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO hotspots were discussed previously as a less-than-significant impact. Thus, the Project's CO emissions would not contribute to significant health effects associated with this pollutant. PM_{10} and $PM_{2.5}$ would not contribute to potential exceedances of the NAAQS or CAAQS for particulate matter, would not obstruct the SDAB from coming into attainment for these pollutants, and would not contribute to significant health effects associated with particulates. Therefore, overall health impacts associated with criteria air pollutants would be **less than significant**.

2.4.4 Would the Project Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People?

Section 41700 of the California Health and Safety Code and SDAPCD Rule 51 (Public Nuisance) prohibit emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. Projects required to obtain permits from SDAPCD are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors. Odor issues are very subjective by the nature of odors themselves and since their measurements are difficult to quantify. As a result, this guideline is qualitative and will focus on the existing and potential surrounding uses and location of sensitive receptors.

The occurrence and severity of potential odor impacts depends on numerous factors: the nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

2.4.4.1 Construction

Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the Project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary, and for the types of construction activities anticipated for Project components, would generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be **less than significant**.

2.4.4.2 Operational

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Examples of land uses and industrial operations that are commonly associated with odor complaints include agricultural uses, wastewater treatment plants, food processing facilities, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities (SCAQMD 1993). In addition to the odor source, the distance between the sensitive receptor(s) and the odor source, as well as the local meteorological conditions, are considerations in the potential for a Project to frequently expose the public to objectionable odors. The Project, once operational would consist of a lifeguard operations facility, as well as several public facilities, which are not expected to produce any nuisance odors; therefore, impacts related to odors caused by the Project would be **less than significant**.

2.4.4.3 Conclusion

The Project would result in a **less-than-significant** impact with respect to odors during construction and operation.

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3 Greenhouse Gas Emissions

3.1 Environmental Setting

3.1.1 Climate Change Overview

Climate change refers to any significant change in measures of climate—such as temperature, precipitation, or wind patterns—lasting for an extended period (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching the Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017).

The greenhouse effect is the trapping and buildup of heat in the atmosphere near the Earth's surface (troposphere). The greenhouse effect traps heat in the troposphere through a threefold process, as follows: short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise (EPA 2017).

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. However, recent climate changes, in particular the warming observed over the past century, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of warming since the mid-twentieth century and are the most significant driver of observed climate change (EPA 2017; IPCC 2013). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further in Section 3.1.5, Potential Effects of Climate Change.

3.1.2 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, water vapor, hydrofluorocarbons (HFCs), hydrochlorofluorocarbons (HCFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).[6] Some GHGs—such as CO_2, CH_4, and N_2O—are emitted to the atmosphere through both natural

[6] California Health and Safety Code Section 38505 identifies seven GHGs that CARB is responsible for monitoring and regulating to reduce emissions: CO_2, CH_4, N_2O, SF_6, HFCs, PFCs, and nitrogen trifluoride.

processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases (e.g., HFCs, HCFCs, PFCs, and SF_6) and are associated with certain industrial products and processes. A summary of the most common GHGs and their sources is included in the following text.[7] Also included is a discussion of other climate-forcing substances.

Carbon Dioxide. CO_2 is both a naturally occurring gas and a byproduct of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fuels (e.g., coal, oil, natural gas, and wood) and changes in land use.

Methane. CH_4 is also produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. CH_4 is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced, once again, through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers; manure management; industrial processes, such as in nitric acid production, nylon production, and fossil-fuel-fired power plants; vehicle emissions; and using N_2O as a propellant (such as in rockets, race cars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric O_3-depleting substances (e.g., chlorofluorocarbons [CFCs], HCFCs, and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to O_3-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as byproducts of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, along with HFCs, to O_3-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF_6 is a colorless gas that is soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.

[7] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change's (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's Glossary of Terms Used in GHG Inventories (CARB 2016a), and EPA's Glossary of Climate Change Terms (EPA 2024c).

- **Nitrogen Trifluoride:** Nitrogen trifluoride is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere), and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O_3.

Hydrochlorofluorocarbons. HCFCs are a large group of compounds with a structure very close to that of CFCs—containing fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter ($PM_{2.5}$), which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is short lived and varies spatially, which makes it difficult to quantify its global warming potential (GWP). DPM emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health. In relation to declining DPM from CARB's regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, created by the interaction between solar ultraviolet radiation and molecular oxygen, plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

3.1.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2024c). The Intergovernmental Panel on Climate Change (IPCC) developed the GWP concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of

the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of carbon dioxide equivalent (CO_2e).

The current version of CalEEMod (Version 2022.1.1.28) utilizes 25 as the GWP for CH_4 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and 298 as the GWP for N_2O, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Proposed Project.

3.1.4 Sources of Greenhouse Gas Emissions

Global Inventory

GHG emissions worldwide in 2022 (the most recent year for which data is available) totaled approximately 53,786 million metric tons (MMT) CO_2e, excluding land use change and forestry (Joint Research Centre 2023). Six countries—China, the United States, Russia, India, Japan, and Brazil—and the European community accounted for approximately 62% of the total global emissions, or approximately 33,124 MMT CO_2e (Joint Research Centre 2023). Table 13 presents the top GHG-emissions-producing countries and the European Union.

Table 13. Six Top GHG Producer Countries and the European Union

Emitting Countries	2022 GHG Emissions (MMT CO_2e)[a,b]
China	15,685
United States	6,017
India	3,943
European Union	3,588
Russia	2,580
Brazil	1,311
Total	**33,124**

Source: Joint Research Centre 2023.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.
[b] GHG emissions do not include land use change and forestry-related GHG emissions.

National Inventory

Per the EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2022, total U.S. GHG emissions were approximately 6,343.2 MMT CO_2e in 2022 (EPA 2024d). Total U.S. emissions have decreased by 3% from 1990 to 2022, down from a high of 15.2% above 1990 levels in 2007. Gross emissions increased from 2021 to 2022 by 0.2% (14.4 MMT CO_2e). Net emissions (i.e., including sinks) were 5,489 MMT CO_2e in 2022. Overall, net emissions increased 1.3% from 2021 to 2022 and decreased 16.7% from 2005 levels. From 2021 to 2022, the increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion due to the continued economic activity rebounding after the height of the COVID-19 pandemic. The CO_2 emissions from fossil fuel combustion increased by 1% from 2021 to 2022, including a 5% increase in residential sector emissions, 8.9% increase in commercial sector emissions, 2.6% increase in industrial emissions, 0.1% decrease in transportation sector emissions, and 0.6% decrease in electric power sector emissions. Carbon sequestration in the land use, land-use change, and forestry sector offset 14.5% of total emissions in 2022 (EPA 2024d).

State Inventory

Per the 2024 EPA Inventory of U.S. GHG Emissions and Sinks: 1990–2022, total U.S. GHG emissions were approximately 6,343 MMT CO_2e in 2022 (EPA 2024d). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 79.7% of total GHG emissions (5,053 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.0% of CO_2 emissions in 2022 (4,699 MMT CO_2e). Relative to the 1990 emissions level, gross U.S. GHG emissions in 2022 were 3.0% lower. GHG emissions increased from 2021 to 2022 by 0.2% (14.4 MMT CO_2e) and, overall, net emissions in 2022 were 15.4% below 2005 levels (EPA 2024d).

According to California's 2000 through 2022 GHG emissions inventory (2024 edition), California emitted 371.1 MMT CO_2e in 2022, including emissions resulting from out-of-state electrical generation (CARB 2024c). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2022 are presented in Table 14.

Table 14. GHG Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	139.9	37.7%
Industrial	72.7	19.6%
Electricity (in state)	42.2	11.4%
Electricity (imports)	17.5	4.7%
Agriculture	29.8	8.0%
Residential	24.7	6.6%
Commercial	14.8	4.0%
High global-warming potential substances	21.3	5.7%
Recycling and waste	8.2	2.2%
Total	**371.1**	**100%**

Source: CARB 2024c.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.

Local Inventories

According to the GHG inventory data compiled by the Energy Policy Initiative Center for the 2021 Regional Plan, in 2016, the County (as defined to include all cities therein and unincorporated San Diego County areas) emitted approximately 26 MMT CO_2e (SANDAG 2021). As outlined in Table 15, passenger cars and light-duty trucks generated approximately 40% of these emissions.

Table 15. San Diego County Greenhouse Gas Emissions by Sectors

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total
Passenger Cars and Light-Duty Trucks	10.4	40.33%
Electricity	5.3	20.55%
Natural Gas	3.1	12.02%
Industrial	2.1	8.14%
Heavy-Duty Trucks and Vehicles	1.8	6.98%
Other Fuels	1.1	4.27%
Off-Road Transportation	0.62	2.40%
Solid Waste	0.59	2.29%
Water	0.24	0.93%
Aviation	0.21	0.81%
Rail	0.11	0.43%
Wastewater	0.07	0.27%
Agriculture	0.05	0.19%
Marine Vessels	0.05	0.19%
Soil Management	0.05	0.19%
Total	**25.79**	**100%**

Source: SANDAG 2021.
Notes: GHG = greenhouse gas; MMT = million metric tons; CO_2e = carbon dioxide equivalent per year
Totals may not sum due to rounding.

The most recent City community emissions is from the 2013 emissions inventory prepared for the 2019 Climate Action Plan (CAP) (City of Oceanside 2019b) (Table 16).

Table 16. City of Oceanside Greenhouse Gas Emissions by Sectors for 2013

Source Category	Annual GHG Emissions (MT CO_2e)	Percent of Total
Transportation	477,178	48.5%
Electricity	251,524	25.6%
Natural Gas	162,447	16.5%
Solid Waste	40,615	4.1%
Water[a]	27,420	2.8%
Municipal Operations	24,828	2.5%
Total	**984,012**	**100%**

Source: City of Oceanside 2019b.
Notes: GHG emissions for each category are rounded. Sums may not add up to totals due to rounding.
[a] Emissions associated with water and wastewater treatment at City-operated facilities were accounted for as municipal emissions. Water emissions include upstream emissions from import of water to the City of Oceanside.

3.1.5 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 IPCC Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes

are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed global mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed, including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days (i.e., the number of days artificial cooling is needed) and a decrease in heating degree days (i.e., the number of days artificial heating is needed), and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately 33% of the state's annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in spring snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems (OEHHA 2018). Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California, as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing (CNRA 2019).

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (in 2006, 2009, 2012, and 2018) that have addressed acceleration of warming across the state; more intense and

frequent heat waves; greater riverine flows; accelerating sea level rise; more intense and frequent drought; more severe and frequent wildfires; more severe storms and extreme weather events; shrinking snowpack and less overall precipitation; and ocean acidification, hypoxia, and warming. To address local and regional governments' need for information to support action in their communities, the Fourth Assessment includes reports for nine regions of the state. Key highlights for the San Diego Region include the following (CNRA 2019):

- Temperature is projected to increase substantially, along with mean temperature.
- Heat wave frequency will increase, with more intensity and longer duration.
- Precipitation will remain highly variable but will change in character, with wetter winters, drier springs, and more frequent and severe droughts punctuated by more intense individual precipitation events.
- Wildfire risk will increase in the future as climate warms. The risk for large catastrophic wildfires driven by Santa Ana wind events will also likely increase as a result of a drier autumns leading to low antecedent precipitation before the height of the Santa Ana wind season.
- The sea level along San Diego County is expected to rise. High tides combined with elevated shoreline water levels produced by locally and distantly driven wind-driven waves will drive extreme events. Longer-term sea level will increase rapidly in the second half of the century and will be punctuated by short periods of storm-driven extreme sea levels that will imperil existing infrastructure, structures, and ecosystems with increasing frequency.

3.2 Regulatory Setting

3.2.1 International Regulations

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change. Under the Convention, governments agreed to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of global climate change.

3.2.2 Federal

Massachusetts v. U.S. Environmental Protection Agency

In Massachusetts v. EPA (April 2007), the U.S. Supreme Court ruled that CO_2 was a pollutant and directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of

CAA Section 202(a). On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under CAA Section 202(a):

- **Endangerment Finding:** The elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- **Cause or Contribute Finding:** The combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

Notably, President Trump's Executive Order 14154 issued on January 10, 2025, called for EPA to consider the legality and applicability of the 2009 Endangerment Finding for Greenhouse Gases.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (Public Law 110-140), among other key measures, did the following to aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel by 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

President Trump's Executive Order 14154 may also impact the EISA. This order declared a national energy emergency and directed federal agencies to expedite the permitting and production of domestic energy resources. This emphasis on increasing fossil fuel production and reducing regulatory barriers may undermine the EISA's objectives of enhancing energy efficiency and promoting renewable energy sources.

Federal Vehicle Standards

In response to the *Massachusetts v. EPA* U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728). In March 2022, NHTSA established new fuel economy standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026 by increasing fuel efficiency by 8% annually for model years 2024 and 2025, and 10% annually for model year 2026.

On March 12, 2025, in response to President Trump's Executive Order 14154, EPA stated that it would reconsider its 2024 rules that would cut passenger vehicle fleetwide tailpipe emissions by nearly 50% by 2032 compared with 2027 projected levels. The EPA said it is also reconsidering a 2022 regulation that aims to drastically cut smog- and soot-forming emissions from heavy-duty trucks, saying the rule makes trucks more expensive.

In January 2025, President Trump's Transportation Secretary moved to rescind fuel economy standards issued under President Biden that aimed to drastically reduce fuel use for cars and trucks. He has also frozen funding to states for EV charging. The NHTSA in June 2024 said it would hike Corporate Average Fuel Economy requirements to about 50.4 miles per gallon (4.67 liters per 100 kilometers) by 2031 from 39.1 miles per gallon currently for light-duty vehicles. NHTSA said in June 2024 the rule for passenger cars and trucks would reduce gasoline consumption by 64 billion gallons through 2050 and cut emissions by 659 million metric tons. It said while some vehicles would be more expensive to buy, consumers would save on fuel costs and estimated net benefits of $35.2 billion.

Trump's Transportation Secretary also directed NHTSA to reconsider rules for heavy-duty pickup trucks and vans through 2035.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill provides for specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40% compared to 2005 levels by 2030. The bill allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles, and includes measures that will make homes more energy efficient.

The IRA authorized the EPA to implement the Greenhouse Gas Reduction Fund program, which is a historic, $27 billion investment to mobilize financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund will be designed to achieve the following program objectives: reduce GHG emissions and other air pollutants; deliver the benefits of GHG- and air-pollution-reducing projects to American communities, particularly low-income and disadvantaged communities; and mobilize financing and private capital to stimulate additional deployment of GHG- and air-pollution-reducing projects (EPA 2025g).

The IRA confirms that reduction of GHGs is a core goal of the Clean Air Act and that the funding provided should allow the EPA to increase the scope of its Clean Air Act rulemakings. The Act also confirms applicability of the IRA to GHGs in three specific areas: (1) California's ability to regulate GHG emissions from vehicles; (2) the EPA's authority to regulate CH_4 emissions from oil and gas facilities; and (3) the EPA's authority to regulate GHG emissions from power plants.

On July 4, 2025, President Trump enacted the One Big Beautiful Bill Act, which reduces the scope of the IRA and accelerates the phase-out of multiple IRA clean-energy incentives, such as residential energy and electric vehicle credits. The One Big Beautiful Bill Act also rescinds substantial federal funding for clean energy, environmental justice, and climate resilience programs, including the Greenhouse Gas Reduction Fund. Furthermore, on July 7, 2025, President Trump signed the EO 14315, which reinforces the changes made under the One Big Beautiful Bill Act, further hindering clean energy programs by eliminating taxpayer subsidies for wind, solar, and other clean energy sources.

3.2.3 State Regulations

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes Executive Orders (Eos), legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

3.2.3.1 State Climate Change Targets

The state has taken a number of actions to address climate change. These actions are summarized below, and include EOs, legislation, and CARB plans and requirements.

Executive Order S-3-05

EO S-3-05 (June 2005) identified GHG emissions-reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO identified the following targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry.

Assembly Bill 32

In furtherance of the goals identified in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006 (California Health and Safety Code Sections 38500–38599). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020, and initiate the transformations required to achieve the state's long-range climate objectives.

Executive Order B-30-15

EO B-30-15 (April 2015) identified an interim GHG-reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050, as set forth in EO S-3-05.

Senate Bill 32 and Assembly Bill 197

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions-reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of

the state's climate policies. AB 197 also added two members of the Legislature to the Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions-reduction measures when updating the Scoping Plan.

Executive Order B-55-18

EO B-55-18 (September 2018) identified a policy for the state to achieve carbon neutrality as soon as possible (no later than 2045) and achieve and maintain net-negative emissions thereafter. The goal is in addition to the existing statewide targets of reducing the state's GHG emissions. CARB will work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Assembly Bill 1279

The Legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net-zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net-negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85% below 1990 levels.

Although AB 1279 establishes an overall policy to achieve net-zero GHG emissions as soon as possible, but no later than 2045, recognizing the need to implement CO_2 removal and carbon capture, and utilization and storage technologies, the Legislature established a specific target of 85% below 1990 levels by 2045 for anthropogenic GHG emissions. Therefore, the net-zero target does not directly apply to development projects, but the 2045 target of 85% below 1990 levels represents the reductions required to contribute to accomplishing the state's overall net-zero policy.

California Air Resources Board's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a scoping plan to help achieve the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code Section 38561[a]), and to update the scoping plan at least once every 5 years. In 2008, CARB approved the first scoping plan: The Climate Change Proposed Scoping Plan: A Framework for Change (Scoping Plan) (CARB 2008). The Scoping Plan included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emissions-reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (2014 Scoping Plan) defined the state's GHG emissions-reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012 (CARB 2014). The 2014 Scoping Plan concluded that California was on track to meet the 2020 target, but recommended that a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The 2014 Scoping Plan recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

In December 2017, CARB released the 2017 Climate Change Scoping Plan (2017 Scoping Plan) for public review and comment (CARB 2017a). The 2017 Scoping Plan builds on the successful framework established in the initial Scoping Plan and 2014 Scoping Plan while identifying new technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. Commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant (SLCP) Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the 2017 Scoping Plan recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

CARB adopted the 2022 Scoping Plan in December 2022. The 2022 CARB Scoping Plan outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward achieving GHG reduction goals by 2030. Per the Legislative Analyst's Office, the 2022 CARB Scoping Plan identifies a more aggressive 2030 GHG goal. As it relates to the 2030 goal, perhaps the most significant change in the 2022 plan (compared to previous Scoping Plans) is that it identifies a new GHG target of 48% below the 1990 level, compared to the current statutory goal of 40% below. Current law requires the state to reduce GHG emissions by at least 40% below the 1990 level by 2030, but it does not specify an alternative goal. According to CARB, a focus on the lower target is needed to put the state on a path to meeting the newly established 2045 goal, consistent with the overall path to 2045 carbon neutrality. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel-fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options, such as green hydrogen (CARB 2022).

The 2022 CARB Scoping Plan also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage from anthropogenic point sources, where CO_2 is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete), and CO_2 removal from ambient air through mechanical (e.g., direct air capture with sequestration) or nature-based (e.g., management of natural and working lands) applications (CARB 2022).

The 2022 CARB Scoping Plan details "Local Actions" in Appendix D. Local actions include recommendations to build momentum for local government actions that align with the state's climate goals, with a focus on local GHG reduction strategies (commonly referred to as climate action planning) and approval of new land use development projects, including through environmental review under CEQA. The recommendations provided in 2022 CARB Scoping Plan Appendix D are non-binding (i.e., not regulatory) and should not be interpreted as a directive to local governments, but rather as evidence-based analytical tools to assist local governments with their role as essential partners in achieving California's climate goals (CARB 2022).

Local actions in the 2022 CARB Scoping Plan recognize consistency with a CEQA-qualified GHG reduction plan, such as a CAP, as a first option for evaluating potential GHG emissions impacts under CEQA. Absent a qualified GHG reduction plan, for residential and mixed-use projects, the 2022 CARB Scoping Plan provides a second option for evaluating project consistency with recommendations for key attributes that projects should achieve that would align with the state's climate goals. These key attributes include electric-vehicle charging infrastructure, infill location, no loss or conversion of natural and working lands, transit-supportive densities or proximity to transit stops, reducing parking requirements, provision of affordable housing (at least 20% of units), no net loss of existing affordable units, and all-electric appliances with no natural gas connection (CARB 2022). Projects that achieve all key attributes are considered "clearly consistent" with the state's climate and housing goals because these attributes address the largest sources of operational emissions for residential and mixed-use projects. According to the 2022 CARB Scoping Plan, in general, residential and mixed-use projects that incorporate all these attributes are aligned with the state's priority GHG reduction strategies for local climate action, as shown in Table 1 of the 2022 CARB Scoping Plan, and with the state's climate and housing goals. Such projects are considered consistent with the Scoping Plan, and therefore, the GHG emissions associated with such projects generally result in a less-than-significant GHG impact under CEQA (CARB 2022). Additionally, the 2022 CARB Scoping Plan states that lead agencies under CEQA "may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals" (CARB 2022).

The above is CARB's recommended approach for evaluating significance of GHG impacts for residential and mixed-use development projects (CARB 2022). However, alternative approaches to evaluating project-level alignment with state climate goals are also provided in the 2022 CARB Scoping Plan Appendix D. Lead agencies under CEQA can make a significance determination based on whether the project would result in net-zero GHG emissions and whether the project is consistent with a significance determination/threshold recommended by the applicable air district or other lead agencies (CARB 2022). The 2022 CARB Scoping Plan Appendix D acknowledges, however, that net zero may not be feasible or appropriate for every project (CARB 2022).

Executive Order B-18-12

EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the Governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also identified goals for existing state buildings for reducing grid-based energy purchases and water use.

Senate Bill 605 and Senate Bill 1383

SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state (California Health and Safety Code Section 39730) and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018 (California Public Resources Code [PRC] Sections 42652–43654). SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, CARB adopted its SLCP Reduction Strategy in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases (CARB 2017b).

Assembly Bill 1757

AB 1757 (September 2022) requires the CNRA to determine a range of targets for natural carbon sequestration and for nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

3.2.3.2 Building Energy

California Code of Regulations, Title 24, Part 6

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the CEC, and revised if necessary (PRC Section 25402[b][1]). The regulations receive input from members of industry and the public to "reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Section 25402[b][2–3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2022 standards improved upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC updates the Title 24 Energy Code every 3 years. The CEC adopted the 2022 Title 24 Energy Code in August 2021, and the California Building Standards Commission approved incorporating the updated code into the California Building Standards Code in December 2021. The 2022 Energy Code went into effect on January 1, 2023. When compared to the 2019 Title 24 Standards, the 2022 amendments include measures that will further reduce energy use in single-family, multi-family, and nonresidential buildings through the following strategies (CEC 2021):

- New prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California.
- Require PV and battery storage systems for newly constructed multi-family and selected nonresidential buildings.
- Updated efficiency measures for lighting; building envelopes; and heating, ventilation, and air conditioning systems.
- Improvements to reduce the energy loads of certain equipment subject to the requirements of the Energy Code that perform a commercial process that is not related to the occupant needs in the building (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

The 2025 Title 24 building energy efficiency standards were adopted in September 2024 and the non-residential portion of the code will become effective January 1, 2026. With the passage of AB 306, which prohibits the California Building Standards Commission and other state and local agencies from adopting new building standards for residential units from October 1, 2025, to June 1, 2031, the residential portion of the 2025 Title 24 code will not be enacted as originally planned by the CEC.

California Code of Regulations Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as California's Green Building Standards (CALGreen), and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. CALGreen took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The 2022 CALGreen standards are the current applicable standards. For nonresidential projects, some of the key mandatory CALGreen 2022 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, and excavated soil and land clearing debris management (24 CCR 11).

California Code of Regulations Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet federal and state standards for energy and water efficiency (20 CCR 1401–1410). The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator/freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

3.2.3.3 Renewable Energy and Energy Procurement

Senate Bill 1078, Senate Bill 1368, Executive Order S-14-08, Executive Order S-21-09, Senate Bill X1-2, and Senate Bill 1020

SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. EO S-14-08 (November 2008) required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. SB X1 2 expanded the RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. SB 100 (2018) increased the standards set forth in SB 350, establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is

the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers to come from eligible renewable energy resources and zero-carbon resources: 90% by December 31, 2035; 95% by December 31, 2040; and 100% by December 31, 2045.

3.2.3.4 Mobile Sources

Low Carbon Fuel Standard

CARB's Low Carbon Fuel Standard (LCFS) program is designed to decrease the carbon intensity of California's transportation fuel pool and provide a range of low-carbon and renewable fuel alternatives. CARB's implementing regulations originally were adopted in 2009, with the most recent program amendments approved in 2018. As most recently amended, the LCFS program sets carbon intensity benchmarks for transportation fuels through calendar year 2030.

State Vehicle Standards (Assembly Bill 1493 and Executive Order B-16-12)

AB 1493 (July 2002) was enacted in response to the transportation sector accounting for a large share of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It ordered CARB, the CEC, the California Public Utilities Commission, and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 identified a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare. As explained under the "Federal Vehicle Standards" subheading in Section 3.2.2, Federal, EPA and NHTSA approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set ZEV mandates in California.

As also explained in Section 3.2.2, in March 2022, EPA reinstated California's authority under the CAA to implement its own GHG emissions standards and ZEV sales mandate. EPA's action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

Heavy-Duty Diesel

CARB adopted the final Heavy-Duty Truck and Bus Regulation on December 31, 2014, to reduce DPM, a major source of black carbon, and NO_x emissions from heavy-duty diesel vehicles (13 CCR 2025). The rule requires that DPM filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule required nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. On December 12, 2013, CARB adopted an Airborne Toxics Control

Measure to limit idling of diesel-fueled commercial vehicles. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485).

Senate Bill 375

SB 375 (California Government Code Section 65080) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG-reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every 8 years. SB 375 requires the state's 18 regional Metropolitan Planning Organizations (MPOs) to prepare a SCS as part of their Regional Transportation Plan (RTP) that will achieve the GHG-reduction targets set by CARB. If an MPO is unable to devise an SCS to achieve the GHG-reduction target, the MPO must prepare an alternative planning strategy demonstrating how the GHG-reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

An SCS does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it (California Government Code Section 65080[b][2][K]). Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars I program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the Low-Emission Vehicle regulation for criteria air pollutant and GHG emissions and a technology forcing regulation for ZEVs that contributes to both types of emission reductions (CARB 2023h). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that by 2025, cars will emit 75% less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the Advanced Clean Cars I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

The Advanced Clean Cars II program, which was adopted in August 2022, established the next set of low-emission vehicle and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality O_3 standards and California's carbon neutrality standards. The main objectives of Advanced Clean Cars II are as follows (CARB 2023h):

- Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
- Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

The Advanced Clean Cars II rulemaking package also considers technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts.

Executive Order N-79-20

EO N-79-20 (September 2020) requires CARB to develop regulations as follows: (1) passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the state toward the target of 100% of in-state sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the state toward the target of 100% of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be zero emission by 2035; and (3) strategies, in coordination with other state agencies, the EPA, and local air districts, to achieve 100% zero emissions from off-road vehicles and equipment operations in the state by 2035. EO N-79-20 called for the development of a ZEV Market Development Strategy, which was released in February 2021, to be updated every 3 years, which ensures coordination and implementation of the EO, and outlines actions to support new and used ZEV markets. In addition, the EO specifies identification of near-term actions and investment strategies to improve clean transportation, sustainable freight, and transit options, and calls for development of strategies, recommendations, and actions by July 15, 2021, to manage and expedite the responsible closure and remediation of former oil extraction sites as the state transitions to a carbon-neutral economy.

Advanced Clean Trucks Regulation

The Advanced Clean Trucks Regulation was also approved by CARB in 2020. The purpose of the Advanced Clean Trucks Regulation is to accelerate the market for ZEVs in the medium- and heavy-duty truck sector and to reduce air pollutant emissions generated from on-road mobile sources (CARB 2021). The regulation has two components, (1) a manufacturer sales requirement and (2) a reporting requirement:

- **Zero-emission truck sales:** Manufacturers who certify Class 2b–8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b–3 truck sales, 75% of Class 4–8 straight truck sales, and 40% of truck tractor sales.
- **Company and fleet reporting:** Large employers, including retailers, manufacturers, brokers, and others, will be required to report information about shipments and shuttle services. Fleet owners with 50 or more trucks will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

3.2.3.5 Water

Executive Order B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Executive Order N-10-21

In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15% from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

3.2.3.6 Solid Waste

Assembly Bill 939, Assembly Bill 341, Assembly Bill 1826, and Senate Bill 1383

In 1989, AB 939, known as the Integrated Waste Management Act (PRC Section 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board (replaced in 2010 by the California Department of Resources Recycling and Recovery, or CalRecycle), which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed of where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required CalRecycle to develop strategies to achieve the state's policy goal.

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

SB 1383 (2016) requires a 50% reduction in organic waste disposal from 2014 levels by 2020 and a 75% reduction by 2025—essentially requiring the diversion of up to 27 million tons of organic waste—to reduce GHG emissions. SB 1383 also requires that not less than 20% of edible food that is currently disposed of be recovered for human consumption by 2025.

3.2.3.7 Other State Actions

Senate Bill 97

SB 97 (August 2007) directed the Governor's Office of Planning and Research (now known as the Governor's Office of Land Use and Climate Innovation) and CNRA to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water

usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA subsequently adopted the CEQA Guidelines amendments pertaining to GHG emissions called for by SB 97 in December 2009, which became effective in March 2010 (CNRA 2009).

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a), as subsequently amended in 2018, states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines now note that an agency "shall have discretion to determine, in the context of a particular project, whether to: (1) Quantify greenhouse gas emissions resulting from a project; and/or (2) Rely on a qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

Executive Order S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

3.2.4 Local

3.2.4.1 San Diego Association of Governments

The passage of SB 375 requires MPOs to prepare an SCS in their RTP. SANDAG serves as the MPO for the San Diego region and is responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by CARB. The RTP/SCS is updated every 4 years in collaboration with the 18 cities and unincorporated County of San Diego, in addition to regional, state, and federal partners. The most recent Regional Plan was adopted in 2021 and provides guidance on meeting or exceeding GHG targets through implementation of five key transportation strategies: complete corridors, high-speed transit services, mobility hubs, flexible fleets, and a digital platform to tie the transportation system together. Through these strategies, the RTP/SCS is projected to reduce per-capita GHG emissions from cars and light-duty trucks to 20% below 2005 levels by 2035, exceeding the region's state-mandated target of 19% (SANDAG 2021).

3.2.4.2 City of Oceanside

Climate Action Plan

The City adopted its CAP on May 8, 2019 (City of Oceanside 2019b). The CAP acts as a roadmap to address challenges of climate change within Oceanside, and outlines measures the City will take to make progress toward meeting the state's GHG reduction goals. The CAP includes a baseline GHG emissions inventory for 2013; GHG emissions forecasts for 2020, 2030, 2035, 2040, and 2050; local GHG emissions reduction strategies and measures to help the City achieve the statewide targets; and implementation and monitoring mechanisms to ensure the City's measures and targets are achieved. The CAP established local GHG emissions reduction targets for future years as follows (City of Oceanside 2019b):

- by 2020, reduce GHG emissions levels to 5 MT CO_2e per capita;
- by 2030, reduce GHG emissions levels to 4 MT CO_2e per capita;
- by 2040, reduce GHG emissions levels to 3 MT CO_2e per capita; and
- by 2050, reduce GHG emissions levels to 2 MT CO_2e per capita.

The CAP was prepared in accordance with the requirements within CEQA Guidelines Section 15183.5, and is considered a qualified GHG reduction strategy.

City of Oceanside Energy Climate Action Element

The Energy Climate Action Element (ECAE) of the City's General Plan was adopted on May 8, 2019, and addresses energy consumption and other activities within the City that may contribute to adverse energy and GHG impacts (City of Oceanside 2019a). The Energy Climate Action Element focuses on activities associated with human-induced climate change. The Energy Climate Action Element outlines sustainability goals and policies for the City's decision-making process, including development review protocols. The primary themes and goals of the Energy Climate Action Element are related to energy efficiency and renewable energy, smart growth and multimodal transportation, zero waste, water conservation, urban greening, local agriculture, and sustainable consumption.

3.3 Significance Criteria and Methodology

3.3.1 Thresholds of Significance

California has developed guidelines to address the significance of GHG emissions impacts that are contained in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). Appendix G provides that a project would have a significant environmental impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Appendix G thresholds for GHGs do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA

Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). Additional guidance regarding assessment of GHGs is discussed below.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, although GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project level under CEQA.

CEQA Guidelines

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project's emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, the CEQA Guidelines specify that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

The extent to which a project increases or decreases GHG emissions in the existing environmental setting should be estimated in accordance with Section 15064.4, Determining the Significance of Impacts from Greenhouse Gas Emissions, of the State CEQA Guidelines. The State CEQA Guidelines indicate that when calculating GHG emissions resulting from a project, lead agencies must make a good-faith effort based on scientific and factual data (Section 15064.4[a]), and lead agencies have discretion to select the model or methodology deemed most appropriate for enabling decision makers to intelligently assess the project's incremental contribution to climate change (Section 15064.4[c]).

The State CEQA Guidelines do not indicate an amount of GHG emissions that constitutes a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to

adopt such thresholds is supported by substantial evidence (State CEQA Guidelines Sections 15064.4[a] and 15064.7[c]). Several agencies throughout the state have drafted and/or adopted numerical threshold approaches and guidelines for analyzing the significance of project-related GHG emissions; however, no numerical thresholds have been formally adopted by an air district or lead agency for use in the San Diego region.

Governor's Office of Planning and Research Guidance

The Governor's Office of Planning and Research's Technical Advisory, titled Discussion Draft CEQA and Climate Change Advisory (OPR 2018), states the following:

> [N]either the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. … Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2018). CEQA Guidelines Section 15064.7(c) specifies that "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

Approaches to Determining Significance

The significance of the project-related GHG emissions can be determined by evaluating the project's compliance with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of GHG emissions. The state's 2030 target (reduce GHG emissions to 40% below 1990 levels by 2030) has been codified in law through SB 32. Therefore, 2030 marks the next statutory statewide milestone target applicable to the proposed project.

The City's 2019 CAP is a qualified GHG emissions reduction plan in accordance with State CEQA Guidelines Section 15183.5. CEQA Guidelines Section 15183.5(a) states that lead agencies may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long-range development plan, or a separate plan, to reduce GHG emissions. Later project-specific environmental documents may tier from and/or incorporate by reference the existing programmatic review. CEQA Guidelines Section 15183.5(b) states that public agencies may choose to analyze and mitigate significant GHG emissions in a plan for the reduction of GHG emissions. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of a CAP.

The City's CAP seeks to align with state efforts to reduce GHG emissions while balancing a variety of community interests, including quality of life, economic development, and social equity. The City's CAP quantified baseline and projected future GHG emissions from activities within the City (City of Oceanside 2019b). State GHG reduction

efforts were first initiated by EO S-3-05 in 2005, which established a 2050 emissions target to stabilize the climate (CARB 2008). EO S-3-05 also established a 2020 GHG emissions target goal, which was later codified by the State Legislature as AB 32. EO B-30-15 then established an additional interim 2030 GHG emissions target, which was also codified by the State Legislature. Proposed City-specific measures and strategies were developed to reduce GHG emissions in accordance with 2020 and 2030 targets codified by the State Legislature. On a per-capita basis, the 2020 GHG emissions target requires that emissions be reduced to "about 10 tons per person by 2020" (CARB 2008), and the subsequent targets require that emissions be reduced to "no more than 6 MT CO_2e per capita by 2030 and no more than 2 MT CO_2e per capita by 2050" (CARB 2017a). The City's CAP established GHG reduction targets for 2030 that are more rigorous than the state's 6 MT CO_2e per capita goal. The City's goal is to achieve GHG emissions levels of 4 MT CO_2e per capita by 2030 and 3 MT CO_2e per capita by 2040. A 2050 target of 2 MT CO_2e per capita is established for the City (City of Oceanside 2019b) consistent with recommendations of the 2017 Scoping Plan and international agreements, such as the Under 2 Memorandum of Understanding, which requires that all "signatories agree to reduce their GHG emissions to two metric tons CO_2e per capita by 2050" (Climate Group 2021). This is the most commonly agreed upon 2050 target, and directly relates to the long-term target of EO-S-05.

As discussed in the City's CAP, to ensure the City remains on track to achieve the long-term reduction goals of the state, the City has implemented GHG reduction measures proactively. The CAP measures outline how the City will reduce its near-term GHG emissions and establish infrastructure to support continued reductions beyond 2030. The City is already projected to meet state-aligned per-capita near-term emissions targets (2020 and 2030), and as such, reduction measures in the CAP (Chapter 3 of the CAP) were selected based on their ability to achieve long-term GHG emission reductions. Measures were focused on energy, water, solid waste, transportation and land use, and agriculture and forestry (City of Oceanside 2019b). Although the City's CAP predates CARB's 2022 Scoping Plan, the City's measures are consistent with CARB's recommendations for local actions focused on transportation electrification, vehicle miles traveled reduction, and building decarbonization (CARB 2022).

GHG emissions are by nature a cumulative impact; therefore, projects may rely on the City's CAP to determine a project's impact on a project-level/cumulative-level basis. Chapter 4, Implementation, of the City's CAP outlines how the CAP reduction measures will be implemented and establishes a mechanism for individual development projects to evaluate their consistency with the CAP through completion of a checklist (City of Oceanside 2019b).

The City's CAP relies on a screening threshold based on land use size and a CAP Consistency Checklist to determine whether a project's emissions would be consistent with GHG emissions estimated within the City's CAP (City of Oceanside 2019b). Consistent with the California Air Pollution Control Officers Association's CEQA and Climate Change document (CAPCOA 2008), the City established a bright-line threshold of significance for GHG emissions impacts: 900 MT CO_2e annually, with construction-related emissions amortized over 20 years. Specifically, the City determined that new development projects emitting less than 900 MT CO_2e annual GHG would not contribute considerably to cumulative climate change impacts, and therefore do not need to demonstrate consistency with the CAP strategies, and would be determined to not conflict with the CAP (City of Oceanside 2019b). The 900 MT CO_2e bright-line threshold represents a market capture rate of 90% of all development projects (CAPCOA 2008). The objective of the bright-line threshold is to set the emissions low enough to capture a substantial fraction of future residential and nonresidential development that will be constructed to accommodate future statewide population and job growth, while setting the emissions threshold high enough to exclude small development Projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions (CAPCOA 2008). The 90% capture rate of new development establishes a strong basis for demonstrating that cumulative reductions

are being achieved across the state. Projects greater than 900 MT CO_2e would be required to show CAP Checklist consistency, which can be used to determine that the project would be consistent with the CAP. Essentially, to demonstrate that a project would comply with the CAP requires a two-step process: the first step is a screening-level bright-line threshold, which, if exceeded, would require the second step, which is a CAP measures consistency analysis (CAPCOA 2008).

CEQA Guidelines Section 15183.5(2) states that an environmental document that relies on a GHG reduction plan for a cumulative impact analysis must identify those requirements specified in the plan that apply to the project, and if those requirements are not otherwise biding and enforceable, incorporate those requirements as mitigation measures applicable to the project. In accordance with CEQA Guidelines Section 15183.5(2), the CAP Checklist provides for streamlined review of projects subject to environmental review, offering an alternative to project-specific analysis of GHG emissions impacts. The CAP Checklist is available to projects that meet locational requirements that further efforts to facilitate housing and employment growth in walkable, transit-served areas, as well as projects that either (1) conform to current land use and zoning standards or (2) involve uses that would generate less GHG emissions than those allowed under current standards.

As discussed above under Section 3.3.1, Thresholds of Significance, GHG emissions are recognized exclusively as a cumulative impact (CAPCOA 2008). The CAP Consistency Checklist is used to determine project-level significance in accordance with CEQA Guidelines Section 15183.5; the measures in the CAP Consistency Checklist identify the specific requirements that must be implemented by development projects on a city-wide basis to achieve identified reduction targets. The CAP addresses the cumulative impact of GHG emissions on a city-wide basis, and a project's compliance with the CAP supports the City's GHG emission reduction goals (City of Oceanside 2019b).

In accordance with CEQA Guidelines Section 15064.4, GHG emissions resulting from construction and operation of the proposed Project were quantitatively estimated. The potential impacts from Project-related GHG emissions were assessed based on the total increase above the existing environmental setting. GHG emissions associated with implementation of the Project were estimated using industry standard and accepted software tools, techniques, and emissions factors.

3.3.2 Approach and Methodology

3.3.2.1 Construction

CalEEMod Version 2022.1 was used to estimate potential Project-generated GHG emissions during construction. As discussed in Section 2.3.2, Approach and Methodology, separate CalEEMod runs were performed for each Project Phase. Construction of the Project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 2.3.2, Approach and Methodology, for air quality are also applicable for the estimation of construction-related GHG emissions. Construction-related GHG emissions were amortized over 20 years and added to operational emissions to compare to the City's bright-line threshold.

3.3.2.2 Operation

Operation of the Project would generate GHG emissions from mobile sources, area sources (landscape maintenance equipment), energy use, water use and wastewater generation, solid waste, and refrigerants. As with

construction, separate CalEEMod runs were performed used to estimate potential Project-generated operational GHG emissions based on Project land uses for each Phase. It was assumed that the Pier View Way Bridges and Lifeguard Headquarters Phase would be fully operational in 2029, and the Beachfront Facilities Phase would be operational in 2034. Emissions from the existing land uses (Existing Scenario) were also estimated using CalEEMod to present the net change in GHG emissions. Operational year 2024 was assumed for the Existing Scenario.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as described in the following text. The Project does not include fireplaces or wood-burning stoves.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated with landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days.

Mobile Sources (Motor Vehicles)

All details for criteria air pollutants discussed in Section 2.3.2 for air quality are also applicable for the estimation of operational-related GHG emissions are also applicable for the estimation of operational mobile source GHG emissions. Regulatory measures related to mobile sources include AB 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel economy improvements was evaluated using the CalEEMod emission factors for motor vehicles in each operational year to the extent it was captured in CalEEMod version 2022.1, which is based on the EMission FACtor (EMFAC) 2021 model.

A detailed discussion of the mobile source emissions methodology is described in Section 2.3.2.2.

Energy

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. CalEEMod default values for energy consumption were applied to the existing scenario and the Pier View Way Bridges and Lifeguard Headquarters project. For the Beachfront Facilities project, specific anticipated energy demand figures were provided by the Applicant and utilized in lieu of CalEEMod default values.

For the Pier View Way Bridges and Lifeguard Headquarters Phase, annual natural gas and electricity emissions were estimated in CalEEMod using default values for emissions factors for San Diego Gas & Electric, which would be the energy source provider for the Project.

A summary of key modeling assumptions for each operational run is provided in Section 2.3.2.2.

Water and Wastewater

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water and the sources of the water. GHG emissions associated with Project water consumption were calculated using CalEEMod using default parameters.

A summary of key modeling assumptions for each operational run is provided below:

- **Existing Scenario.** Default CalEEMod values were applied.
- **Pier View Way Bridges and Lifeguard Headquarters Phase.** Default CalEEMod values were applied.
- **Beachfront Facilities Phase.** Applicant-provided Project-specific data for the anticipated water demand were utilized in lieu of CalEEMod default values.

Solid Waste

The Project would generate solid waste. A large percentage of this waste would be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the Project were calculated by CalEEMod using default parameters for both Project Phases.

Refrigerants

Refrigerants are substances used in equipment for air conditioning and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains), and an operational refrigerant leak rate, and each refrigerant has a GWP that is specific to that refrigerant. CalEEMod default values were applied, which quantify refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime, and then derives average annual emissions from the lifetime estimate (CAPCOA 2022). GHG emissions associated with the Project's use of refrigerants were calculated by CalEEMod using default parameters for both Project Phases.

For additional details see Attachment A, CalEEMod Outputs and Estimated Emissions.

3.4 Impact Analysis

This section evaluates the GHG emissions impacts associated with the Project. The significance criteria described in Section 3.3.1, Thresholds of Significance, were used to evaluate impacts associated with construction and operation of the Project.

3.4.1 Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? and Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City of Oceanside's CAP was adopted in May 2019 to assist the City in reducing GHG emissions to 4 MT CO_2e per capita by 2030, and 2 MT CO_2e per capita by 2050 to align with the state's targets established by EOs B-30-15 and S-3-05, respectively. According to the City's CAP, new discretionary development Projects subject to CEQA review that emit less than 900 MT CO_2e annually would not contribute considerably to cumulative climate change impacts, and therefore, would be considered consistent with the CAP and associated emissions projections (City of Oceanside 2019b). Projects that exceed the 900 MT CO_2e are evaluated to determine if the CAP Consistency Checklist is applicable.

Project-generated GHG emissions were estimated per the methodology described in Section 3.3.2, Approach and Methodology, and are discussed for construction and operation below. Quantification of GHG emissions is provided pursuant to CEQA Guidelines Section 15064.4(c), and the determination of significance is based on the CAP Consistency Checklist.

3.4.1.1 Project GHG Emissions

Construction

Table 17 shows the estimated annual GHG construction emissions associated with the Project. Additional information about methodology and approach are provided in Section 2.3.2.1. Complete details of the construction emissions calculations are provided in Attachment A.

Table 17. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Pier View Way Bridges and Lifeguard Operations Phase					
2027	206.72	0.01	0.01	0.04	209.19
2028	405.91	0.02	<0.01	0.03	407.74
2029	13.33	<0.01	<0.01	<0.01	13.42
Total	**625.96**	**0.03**	**0.01**	**0.08**	**630.34**
Beachfront Facilities Phase					
2029	312.45	0.01	0.01	0.06	315.25
2030	199.14	0.01	0.01	0.06	201.82
2031	470.61	0.02	0.01	0.08	475.05
2032	505.84	0.02	0.02	0.09	511.02

Table 17. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
2033	398.58	0.01	0.01	0.06	401.94
Total	*1,886.61*	*0.07*	*0.05*	*0.35*	*1,905.08*
Project Total	**2,512.57**	**0.10**	**0.07**	**0.43**	**2,535.42**
				Amortized Over 20-Years	*126.77*

Source: Attachment A, CalEEMod Outputs and Estimated Emissions.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerants; CO_2e = carbon dioxide equivalent.
Totals may not sum due to rounding.

As shown in Table 17, the estimated total GHG emissions from construction of the Project would be 2,535 MT CO_2e. When amortized over 20 years, the estimated annual GHG emissions from construction of the Project would be approximately 127 MT CO_2e per year.

Operation

Table 18 shows the estimated annual GHG operational emissions.

Table 18. Summary of Estimated Annual Operation Greenhouse Gas Emissions

Emissions Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Existing Scenario					
Mobile[1]	—	—	—	—	—
Area	0.50	<0.01	<0.01	<0.01	0.50
Energy	172.98	0.01	<0.01	<0.01	173.52
Water	4.17	0.06	<0.01	<0.01	6.17
Waste	16.18	1.62	<0.01	<0.01	56.61
Refrigerants	—	—	—	0.23	0.23
				Total	**237.04**
Pier View Way Bridges and Lifeguard Headquarters Phase					
Mobile[1]	68.15	<0.01	<0.01	0.08	69.05
Area	0.10	<0.01	<0.01	<0.01	0.10
Energy	18.39	<0.01	<0.01	<0.01	18.55
Water	0.70	0.05	<0.01	<0.01	2.28
Waste	1.41	0.14	<0.01	<0.01	4.92
Refrigerants	0.00	0.00	0.00	0.22	0.22
				Total	**95.13**
Beachfront Facilities Phase					
Mobile[1]	—	—	—	—	—
Area	0.51	<0.01	<0.01	<0.01	0.51
Energy	30.63	0.01	<0.01	<0.01	30.99

Table 18. Summary of Estimated Annual Operation Greenhouse Gas Emissions

Emissions Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Water	5.08	0.20	<0.01	<0.01	11.38
Waste	17.62	1.76	<0.01	<0.01	61.63
Refrigerants	0.00	0.00	0.00	0.02	0.02
				Total	**104.53**
Project Totals					
				Total Project Operational Emissions	199.66
				Amortized Construction Emissions (20 years)	126.77
				Total Operational Emissions with Amortized Construction	326.43
				Net Change (Project – Existing Scenario)	**89.39**
				Brightline Threshold	*900*
				Exceeds Threshold?	**No**

Source: See Attachment A, CalEEMod Outputs and Estimated Emissions, for complete results.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R= refrigerant; CO_2e = carbon dioxide equivalent.
<0.01 = reported value is less than 0.01.

As discussed above, total annual operational emissions were combined with amortized (20 years) construction emissions and compared to the recommended 900 MT CO_2e bright-line threshold. As shown in Table 18, implementation of the Project would result in a net of approximately 89 MT CO_2e per year including amortized construction emissions, which would not exceed the City's bright-line threshold of 900 MT CO_2e per year.

Per City guidance, new development projects that emit more than 900 MT CO_2e annually could have a considerable contribution to cumulative climate change impacts. Because Project-generated operational emissions plus amortized Project construction emissions are not estimated to exceed this bright-line threshold, the Project is not required to demonstrate consistency with the CAP Consistency Checklist to ensure that the specific emissions targets identified in the City's CAP can be achieved. The Project would therefore be consistent with the goals and GHG targets established within the City's CAP.

3.4.1.2 Consistency with Senate Bill 32, Assembly Bill 1279, Executive Order S-3-05, and Assembly Bill 1279

EO S-3-05 identified the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, must ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. AB 1279 establishes a policy for the state to achieve net-zero GHG emissions no later than 2045, and for statewide anthropogenic GHG emissions to be reduced to at least 85% below 1990 levels by 2045.

Each Scoping Plan builds upon the successful framework established by the initial Scoping Plan and subsequent updates, while also identifying new, technologically feasible, and cost-effective strategies to ensure that California meets increasingly stringent GHG reduction targets in a way that promotes and rewards innovation, continues to

foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities (CARB 2022). The Scoping Plan updates have continued to express optimism in meeting future year targets of 2050 and 2030, as evaluated in the 2014 and 2017 Scoping Plans (respectively), and most recently, the 2045 goal addressed in the 2022 Scoping Plan under EO B-55-18, which AB 1279 codified and expanded on.

Although there are no established protocols or thresholds of significance for that future year analysis, CARB forecasted in the 2014 Scoping Plan that compliance with the current Scoping Plan would put the state on a trajectory of meeting the long-term 2050 GHG goals, although the specific path to compliance was unknown at the time (CARB 2014). The 2017 Scoping Plan outlined a strategy to achieve the 2030 GHG reduction target. The proposed scenario in the 2022 Scoping Plan lays out a path not just to carbon neutrality by 2045, but also to the 2030 GHG emissions reduction target (CARB 2022). The modeling indicates that, if the plan described in the proposed scenario is fully implemented, and done so on schedule, the state is on track to reduce its emissions to 260 MMT CO_2e by 2030 (CARB 2022).

The 2017 Scoping Plan included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), increase stringency of the low-carbon fuel standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed SLCP Plan, and increase stringency of SB 375 targets. The 2022 Scoping Plan builds upon and accelerates programs currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; and displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022). Many of the measures and programs included in the Scoping Plan would result in the reduction of Project-related GHG emissions with no action required at the Project-level, including GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (low-carbon fuel standard), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy). Overall, the Project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent applicable and required by law and would not conflict with CARB's 2017 or 2022 Scoping Plan updates or with the state's ability to achieve the 2030 and 2045 GHG reduction and carbon neutrality goals.

3.4.1.3 Consistency with SANDAG RTP/SCS

At the regional level, the SANDAG's RTP/SCS has been adopted for the purpose of reducing GHG emissions attributable to passenger vehicles in the San Diego region (SANDAG 2021). The RTP/SCS is not directly applicable to the Project because the underlying purpose of the RTP/SCS is to provide direction and guidance on future regional growth (i.e., the location of new residential and nonresidential land uses) and transportation patterns throughout San Diego County, as stipulated under SB 375. CARB has recognized that the approved RTP/SCS is consistent with SB 375. The SANDAG Regional Plan is generally consistent with the local government plans. Because the Project is largely a renovation of existing facilities and within the scope of development that was anticipated in the General Plan, it would not result in growth that would conflict with the SANDAG Regional Plan. Based on the preceding, the Project would not conflict with the SANDAG RTP/SCS.

3.4.1.4 Conclusion

The Project would not exceed the City's 900 MT CO_2e bright-line threshold, which indicates that no additional analysis is required to determine if the Project would have a cumulative contribution to GHGs. Furthermore, the Project would not conflict with the SANDAG RTP/SCS, the 2017 Scoping Plan, or the 2022 Scoping Plan. Accordingly, the Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment, nor would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The Project's GHG impact would be **less than significant**.

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Attachment A

Air Quality and Greenhouse Gas Emissions CalEEMod Outputs and Estimated Emissions

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1.1. Basic Project Information

Data Field	Value
Project Name	Oceanside Pier Existing
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	20.6
Location	33.19442704223998, -117.38421369778368
County	San Diego
City	Oceanside
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6200
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
High Turnover (Sit Down Restaurant)	0.80	1000sqft	0.02	800	0.00	—	—	—
Place of Worship	29.5	1000sqft	0.68	29,541	2,954	—	—	—

Parking Lot	41.0	Space	0.37	0.00	1,607	—	—	—
Government Office Building	3.71	1000sqft	0.09	3,709	371	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.08	1.04	0.39	1.80	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	101	1,072	1,174	10.2	0.01	1.37	1,435
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.82	0.80	0.38	0.32	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	101	1,066	1,168	10.2	0.01	1.37	1,429
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.95	0.91	0.38	1.05	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	101	1,069	1,171	10.2	0.01	1.37	1,432
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.17	0.07	0.19	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	16.8	177	194	1.69	< 0.005	0.23	237

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	1.04	1.02	0.01	1.48	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.09	6.09	< 0.005	< 0.005	—	6.11
Energy	0.04	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,045	1,045	0.07	< 0.005	—	1,048
Water	—	—	—	—	—	—	—	—	—	—	—	3.65	21.5	25.2	0.38	0.01	—	37.3
Waste	—	—	—	—	—	—	—	—	—	—	—	97.7	0.00	97.7	9.77	0.00	—	342
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.37	1.37
Total	1.08	1.04	0.39	1.80	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	101	1,072	1,174	10.2	0.01	1.37	1,435
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.77	0.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,045	1,045	0.07	< 0.005	—	1,048
Water	—	—	—	—	—	—	—	—	—	—	—	3.65	21.5	25.2	0.38	0.01	—	37.3
Waste	—	—	—	—	—	—	—	—	—	—	—	97.7	0.00	97.7	9.77	0.00	—	342
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.37	1.37
Total	0.82	0.80	0.38	0.32	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	101	1,066	1,168	10.2	0.01	1.37	1,429
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.90	0.89	0.01	0.73	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.00	3.00	< 0.005	< 0.005	—	3.01
Energy	0.04	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	1,045	1,045	0.07	< 0.005	—	1,048
Water	—	—	—	—	—	—	—	—	—	—	—	3.65	21.5	25.2	0.38	0.01	—	37.3
Waste	—	—	—	—	—	—	—	—	—	—	—	97.7	0.00	97.7	9.77	0.00	—	342
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.37	1.37
Total	0.95	0.91	0.38	1.05	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	101	1,069	1,171	10.2	0.01	1.37	1,432
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.17	0.16	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.50	0.50	< 0.005	< 0.005	—	0.50
Energy	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	173	173	0.01	< 0.005	—	174
Water	—	—	—	—	—	—	—	—	—	—	—	0.60	3.57	4.17	0.06	< 0.005	—	6.17
Waste	—	—	—	—	—	—	—	—	—	—	—	16.2	0.00	16.2	1.62	0.00	—	56.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23
Total	0.17	0.17	0.07	0.19	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	16.8	177	194	1.69	< 0.005	0.23	237

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0	< 0.005	< 0.005	—	46.1
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	428	428	0.02	< 0.005	—	429
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	22.7	22.7	< 0.005	< 0.005	—	22.8

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	99.3	99.3	0.01	< 0.005	—	99.7
Total	—	—	—	—	—	—	—	—	—	—	—	—	596	596	0.03	< 0.005	—	598
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	46.0	46.0	< 0.005	< 0.005	—	46.1
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	428	428	0.02	< 0.005	—	429
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	22.7	22.7	< 0.005	< 0.005	—	22.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	99.3	99.3	0.01	< 0.005	—	99.7
Total	—	—	—	—	—	—	—	—	—	—	—	—	596	596	0.03	< 0.005	—	598
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	7.61	7.61	< 0.005	< 0.005	—	7.64
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	70.8	70.8	< 0.005	< 0.005	—	71.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	3.76	3.76	< 0.005	< 0.005	—	3.77
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	16.4	16.4	< 0.005	< 0.005	—	16.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	98.6	98.6	0.01	< 0.005	—	99.0

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.8	28.8	< 0.005	< 0.005	—	28.9
Place of Worship	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	382	382	0.03	< 0.005	—	383
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.1	38.1	< 0.005	< 0.005	—	38.2
Total	0.04	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	449	449	0.04	< 0.005	—	450
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.8	28.8	< 0.005	< 0.005	—	28.9
Place of Worship	0.04	0.02	0.32	0.27	< 0.005	0.02	—	0.02	0.02	—	0.02	—	382	382	0.03	< 0.005	—	383
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Government Office Building	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.1	38.1	< 0.005	< 0.005	—	38.2
Total	0.04	0.02	0.38	0.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	449	449	0.04	< 0.005	—	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.77	4.77	< 0.005	< 0.005	—	4.78
Place of Worship	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	63.3	63.3	0.01	< 0.005	—	63.4
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.30	6.30	< 0.005	< 0.005	—	6.32
Total	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	74.3	74.3	0.01	< 0.005	—	74.5

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.73	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coating	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.24	0.01	1.48	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.09	6.09	< 0.005	< 0.005	—	6.11
Total	1.04	1.02	0.01	1.48	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.09	6.09	< 0.005	< 0.005	—	6.11
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.73	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.77	0.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.02	0.02	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.50	0.50	< 0.005	< 0.005	—	0.50
Total	0.17	0.16	< 0.005	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.50	0.50	< 0.005	< 0.005	—	0.50

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.47	2.67	3.13	0.05	< 0.005	—	4.67
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1.77	10.5	12.3	0.18	< 0.005	—	18.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.21	0.21	< 0.005	< 0.005	—	0.21
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.41	8.14	9.55	0.15	< 0.005	—	14.2
Total	—	—	—	—	—	—	—	—	—	—	—	3.65	21.5	25.2	0.38	0.01	—	37.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.47	2.67	3.13	0.05	< 0.005	—	4.67
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1.77	10.5	12.3	0.18	< 0.005	—	18.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.21	0.21	< 0.005	< 0.005	—	0.21

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.41	8.14	9.55	0.15	< 0.005	—	14.2
Total	—	—	—	—	—	—	—	—	—	—	—	3.65	21.5	25.2	0.38	0.01	—	37.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.08	0.44	0.52	0.01	< 0.005	—	0.77
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.29	1.74	2.04	0.03	< 0.005	—	3.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.03	0.03	< 0.005	< 0.005	—	0.03
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.23	1.35	1.58	0.02	< 0.005	—	2.36
Total	—	—	—	—	—	—	—	—	—	—	—	0.60	3.57	4.17	0.06	< 0.005	—	6.17

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.13	0.00	5.13	0.51	0.00	—	18.0

Place of Worship	—	—	—	—	—	—	—	—	—	—	—	90.7	0.00	90.7	9.07	0.00	—	317
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.86	0.00	1.86	0.19	0.00	—	6.50
Total	—	—	—	—	—	—	—	—	—	—	—	97.7	0.00	97.7	9.77	0.00	—	342
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.13	0.00	5.13	0.51	0.00	—	18.0
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	90.7	0.00	90.7	9.07	0.00	—	317
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.86	0.00	1.86	0.19	0.00	—	6.50
Total	—	—	—	—	—	—	—	—	—	—	—	97.7	0.00	97.7	9.77	0.00	—	342
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.85	0.00	0.85	0.08	0.00	—	2.97
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	15.0	0.00	15.0	1.50	0.00	—	52.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Government	—	—	—	—	—	—	—	—	—	—	—	0.31	0.00	0.31	0.03	0.00	—	1.08
Total	—	—	—	—	—	—	—	—	—	—	—	16.2	0.00	16.2	1.62	0.00	—	56.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	1.25
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.37	1.37
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.25	1.25
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.37	1.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.23	0.23

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	51,075	17,025	964

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
High Turnover (Sit Down Restaurant)	28,498	589	0.0330	0.0040	89,925
Place of Worship	265,084	589	0.0330	0.0040	1,192,401
Parking Lot	14,081	589	0.0330	0.0040	0.00
Government Office Building	61,549	589	0.0330	0.0040	118,773

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
High Turnover (Sit Down Restaurant)	242,827	0.00
Place of Worship	924,306	44,147
Parking Lot	0.00	24,021
Government Office Building	736,829	5,543

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
High Turnover (Sit Down Restaurant)	9.52	—
Place of Worship	168	—
Parking Lot	0.00	—
Government Office Building	3.45	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.71	annual days of extreme heat
Extreme Precipitation	2.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	21.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	29.9
AQ-PM	49.8
AQ-DPM	72.1
Drinking Water	70.4
Lead Risk Housing	12.1
Pesticides	0.00
Toxic Releases	15.0
Traffic	—
Effect Indicators	—
CleanUp Sites	86.2
Groundwater	89.6
Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	91.9
Solid Waste	0.00
Sensitive Population	—
Asthma	29.8
Cardio-vascular	46.8
Low Birth Weights	12.1
Socioeconomic Factor Indicators	—

Education	4.67
Housing	43.9
Linguistic	2.81
Poverty	26.7
Unemployment	8.69

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	58.42422687
Employed	30.82253304
Median HI	39.72796099
Education	—
Bachelor's or higher	69.88322854
High school enrollment	100
Preschool enrollment	5.774412935
Transportation	—
Auto Access	35.49339151
Active commuting	67.45797511
Social	—
2-parent households	85.70511998
Voting	64.7760811
Neighborhood	—
Alcohol availability	19.96663673
Park access	52.67547799
Retail density	41.88374182
Supermarket access	38.88104709

Tree canopy	12.04927499
Housing	—
Homeownership	9.380213012
Housing habitability	36.55844989
Low-inc homeowner severe housing cost burden	26.6521237
Low-inc renter severe housing cost burden	71.07660721
Uncrowded housing	60.05389452
Health Outcomes	—
Insured adults	36.09649686
Arthritis	23.1
Asthma ER Admissions	43.4
High Blood Pressure	43.5
Cancer (excluding skin)	16.1
Asthma	61.7
Coronary Heart Disease	31.2
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	70.5
Life Expectancy at Birth	21.0
Cognitively Disabled	54.2
Physically Disabled	50.9
Heart Attack ER Admissions	43.9
Mental Health Not Good	64.8
Chronic Kidney Disease	45.1
Obesity	60.5
Pedestrian Injuries	66.5
Physical Health Not Good	68.2
Stroke	51.7
Health Risk Behaviors	—

Binge Drinking	5.2
Current Smoker	60.5
No Leisure Time for Physical Activity	77.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	37.9
Children	36.4
Elderly	53.1
English Speaking	70.3
Foreign-born	9.1
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	8.4
Traffic Density	0.0
Traffic Access	55.5
Other Indices	—
Hardship	16.7
Other Decision Support	—
2016 Voting	69.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	21.0
Healthy Places Index Score for Project Location (b)	47.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Vehicle Data	Lifeguard operations are 7 days/week.

Oceanside Pier Bridges Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Oceanside Pier Bridges
Construction Start Date	9/1/2027
Operational Year	2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	20.6
Location	33.194553321910945, -117.38399990595613
County	San Diego
City	Oceanside
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6200
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.30

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Government Office Building	6.28	1000sqft	2.84	6,278	10,000	—	—	—

Other Non-Asphalt Surfaces	0.46	1000sqft	0.01	0.00	0.00	—	—	—
High Turnover (Sit Down Restaurant)	0.83	1000sqft	0.02	835	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.79	3.18	24.3	53.1	0.09	0.58	5.55	6.13	0.54	1.86	2.39	—	9,942	9,942	0.42	0.31	4.70	10,051
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.79	3.17	24.4	52.8	0.09	0.58	5.55	6.13	0.54	1.86	2.39	—	9,912	9,912	0.42	0.32	0.12	10,017
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	0.98	7.64	15.0	0.03	0.20	0.67	0.74	0.19	0.25	0.31	—	2,452	2,452	0.10	0.04	0.27	2,463
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.18	1.39	2.74	< 0.005	0.04	0.12	0.13	0.03	0.05	0.06	—	406	406	0.02	0.01	0.04	408

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.79	3.18	24.3	53.1	0.09	0.58	5.55	6.13	0.54	1.86	2.39	—	9,942	9,942	0.42	0.31	4.70	10,051
2028	1.64	1.39	11.2	22.0	0.04	0.29	0.18	0.47	0.27	0.04	0.31	—	3,589	3,589	0.14	0.04	0.63	3,605
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.79	3.17	24.4	52.8	0.09	0.58	5.55	6.13	0.54	1.86	2.39	—	9,912	9,912	0.42	0.32	0.12	10,017
2028	2.08	1.91	11.2	21.9	0.04	0.29	0.19	0.47	0.27	0.05	0.31	—	3,579	3,579	0.14	0.04	0.02	3,594
2029	2.04	1.88	5.96	12.2	0.02	0.13	0.19	0.32	0.12	0.05	0.16	—	1,781	1,781	0.07	0.03	0.02	1,793
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.41	0.34	2.74	6.38	0.01	0.07	0.67	0.74	0.06	0.25	0.31	—	1,249	1,249	0.05	0.04	0.27	1,264
2028	1.15	0.98	7.64	15.0	0.03	0.20	0.13	0.33	0.19	0.03	0.22	—	2,452	2,452	0.10	0.03	0.19	2,463
2029	0.11	0.11	0.31	0.57	< 0.005	0.01	0.01	0.01	0.01	< 0.005	0.01	—	80.5	80.5	< 0.005	< 0.005	0.01	81.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.07	0.06	0.50	1.17	< 0.005	0.01	0.12	0.13	0.01	0.05	0.06	—	207	207	0.01	0.01	0.04	209
2028	0.21	0.18	1.39	2.74	< 0.005	0.04	0.02	0.06	0.03	0.01	0.04	—	406	406	0.02	< 0.005	0.03	408
2029	0.02	0.02	0.06	0.10	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	< 0.005	13.4

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.31	1.20	2.51	4.01	0.01	0.13	0.39	0.52	0.13	0.10	0.23	11.4	961	973	1.20	0.03	2.38	1,013
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	1.25	1.15	2.52	3.57	0.01	0.13	0.39	0.52	0.13	0.10	0.23	11.4	941	952	1.20	0.03	1.35	992
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.50	0.46	0.54	1.92	0.01	0.03	0.39	0.41	0.03	0.10	0.12	11.4	582	594	1.19	0.02	1.78	632
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.08	0.10	0.35	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	1.88	96.4	98.3	0.20	< 0.005	0.29	105

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.18	0.16	0.13	1.54	< 0.005	< 0.005	0.39	0.39	< 0.005	0.10	0.10	—	428	428	0.02	0.01	1.06	434
Area	0.22	0.21	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.27	1.27	< 0.005	< 0.005	—	1.28
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	111	111	0.02	< 0.005	—	112
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	1.36	4.24	0.30	0.01	—	13.8
Waste	—	—	—	—	—	—	—	—	—	—	—	8.50	0.00	8.50	0.85	0.00	—	29.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.32	1.32
Stationary	0.90	0.82	2.29	2.09	< 0.005	0.12	0.00	0.12	0.12	0.00	0.12	0.00	420	420	0.02	< 0.005	0.00	421
Total	1.31	1.20	2.51	4.01	0.01	0.13	0.39	0.52	0.13	0.10	0.23	11.4	961	973	1.20	0.03	2.38	1,013
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.18	0.16	0.15	1.41	< 0.005	< 0.005	0.39	0.39	< 0.005	0.10	0.10	—	409	409	0.02	0.02	0.03	414
Area	0.16	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	111	111	0.02	< 0.005	—	112
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	1.36	4.24	0.30	0.01	—	13.8

Waste	—	—	—	—	—	—	—	—	—	—	—	8.50	0.00	8.50	0.85	0.00	—	29.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.32	1.32
Stationary	0.90	0.82	2.29	2.09	< 0.005	0.12	0.00	0.12	0.12	0.00	0.12	0.00	420	420	0.02	< 0.005	0.00	421
Total	1.25	1.15	2.52	3.57	0.01	0.13	0.39	0.52	0.13	0.10	0.23	11.4	941	952	1.20	0.03	1.35	992
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.18	0.16	0.15	1.42	< 0.005	< 0.005	0.39	0.39	< 0.005	0.10	0.10	—	412	412	0.02	0.02	0.46	417
Area	0.19	0.19	< 0.005	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.63	0.63	< 0.005	< 0.005	—	0.63
Energy	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	111	111	0.02	< 0.005	—	112
Water	—	—	—	—	—	—	—	—	—	—	—	2.88	1.36	4.24	0.30	0.01	—	13.8
Waste	—	—	—	—	—	—	—	—	—	—	—	8.50	0.00	8.50	0.85	0.00	—	29.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.32	1.32
Stationary	0.12	0.11	0.31	0.29	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	0.00	57.5	57.5	< 0.005	< 0.005	0.00	57.7
Total	0.50	0.46	0.54	1.92	0.01	0.03	0.39	0.41	0.03	0.10	0.12	11.4	582	594	1.19	0.02	1.78	632
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.03	0.26	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	68.2	68.2	< 0.005	< 0.005	0.08	69.0
Area	0.03	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.4	18.4	< 0.005	< 0.005	—	18.6
Water	—	—	—	—	—	—	—	—	—	—	—	0.48	0.23	0.70	0.05	< 0.005	—	2.28
Waste	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.92
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Stationary	0.02	0.02	0.06	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	9.52	9.52	< 0.005	< 0.005	0.00	9.55
Total	0.09	0.08	0.10	0.35	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	1.88	96.4	98.3	0.20	< 0.005	0.29	105

3. Construction Emissions Details

3.1. Demolition (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.30	2.77	21.5	41.1	0.07	0.52	—	0.52	0.49	—	0.49	—	6,255	6,255	0.25	0.05	—	6,276
Demolition	—	—	—	—	—	—	2.09	2.09	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.30	2.77	21.5	41.1	0.07	0.52	—	0.52	0.49	—	0.49	—	6,255	6,255	0.25	0.05	—	6,276
Demolition	—	—	—	—	—	—	2.09	2.09	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.20	1.53	2.93	< 0.005	0.04	—	0.04	0.03	—	0.03	—	446	446	0.02	< 0.005	—	447
Demolition	—	—	—	—	—	—	0.15	0.15	—	0.02	0.02	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.28	0.53	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.8	73.8	< 0.005	< 0.005	—	74.0
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.19	0.13	2.21	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	493	493	0.02	0.02	1.60	501
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.11	50.2
Hauling	0.05	0.02	0.87	0.34	< 0.005	0.01	0.19	0.20	0.01	0.05	0.06	—	687	687	0.04	0.11	1.36	721
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.19	0.17	1.94	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	466	466	0.02	0.02	0.04	472
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	< 0.005	50.2
Hauling	0.05	0.01	0.90	0.34	< 0.005	0.01	0.19	0.20	0.01	0.05	0.06	—	687	687	0.04	0.11	0.04	720
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.5	33.5	< 0.005	< 0.005	0.05	34.0
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.43	3.43	< 0.005	< 0.005	< 0.005	3.58
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.9	48.9	< 0.005	0.01	0.04	51.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.55	5.55	< 0.005	< 0.005	0.01	5.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.59

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.10	8.10	< 0.005	< 0.005	0.01	8.50

3.3. Rock/Riprap Removal (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.82	8.76	0.02	0.03	—	0.03	0.03	—	0.03	—	1,669	1,669	0.07	0.01	—	1,675
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.82	8.76	0.02	0.03	—	0.03	0.03	—	0.03	—	1,669	1,669	0.07	0.01	—	1,675
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.03	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	68.6	68.6	< 0.005	< 0.005	—	68.8
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.4	11.4	< 0.005	< 0.005	—	11.4
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54.8	54.8	< 0.005	< 0.005	0.18	55.7
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.11	50.2
Hauling	0.05	0.02	0.87	0.34	< 0.005	0.01	0.19	0.20	0.01	0.05	0.06	—	687	687	0.04	0.11	1.36	721
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.8	51.8	< 0.005	< 0.005	< 0.005	52.5
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	< 0.005	50.2
Hauling	0.05	0.01	0.90	0.34	< 0.005	0.01	0.19	0.20	0.01	0.05	0.06	—	687	687	0.04	0.11	0.04	720
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.15	2.15	< 0.005	< 0.005	< 0.005	2.18

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.06
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.2	28.2	< 0.005	< 0.005	0.02	29.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.67	4.67	< 0.005	< 0.005	< 0.005	4.90

3.5. Restore Beach Access (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.30	1.91	13.7	0.02	0.06	—	0.06	0.06	—	0.06	—	2,379	2,379	0.10	0.02	—	2,388
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.21	1.51	< 0.005	0.01	—	0.01	0.01	—	0.01	—	261	261	0.01	< 0.005	—	262

Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.27	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.2	43.2	< 0.005	< 0.005	—	43.3
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.36	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	86.3	86.3	< 0.005	< 0.005	0.01	87.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.03	1.63	0.62	0.01	0.02	0.33	0.36	0.02	0.09	0.11	—	1,237	1,237	0.06	0.20	0.06	1,297
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.54	9.54	< 0.005	< 0.005	0.01	9.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.18	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	135	135	0.01	0.02	0.12	142
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.60

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.4	22.4	< 0.005	< 0.005	0.02	23.5

3.7. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61	1.36	11.2	21.2	0.04	0.32	—	0.32	0.29	—	0.29	—	3,362	3,362	0.14	0.03	—	3,374
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.66	1.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	197	197	0.01	< 0.005	—	198
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.7	32.7	< 0.005	< 0.005	—	32.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.72	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	173	173	0.01	0.01	0.02	175
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	< 0.005	50.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.02	10.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.82	2.82	< 0.005	< 0.005	< 0.005	2.95
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.72
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.32	11.1	21.2	0.04	0.29	—	0.29	0.27	—	0.27	—	3,362	3,362	0.14	0.03	—	3,374

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.32	11.1	21.2	0.04	0.29	—	0.29	0.27	—	0.27	—	3,362	3,362	0.14	0.03	—	3,374
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	7.37	14.1	0.02	0.19	—	0.19	0.18	—	0.18	—	2,237	2,237	0.09	0.02	—	2,245
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.34	2.57	< 0.005	0.04	—	0.04	0.03	—	0.03	—	370	370	0.02	< 0.005	—	372
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.78	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.54	182
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.9	46.9	< 0.005	0.01	0.10	49.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.07	0.06	0.68	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	170	170	< 0.005	0.01	0.01	172
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.9	46.9	< 0.005	0.01	< 0.005	49.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.46	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	114	114	< 0.005	< 0.005	0.15	115
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.2	31.2	< 0.005	< 0.005	0.03	32.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.8	18.8	< 0.005	< 0.005	0.03	19.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.17	5.17	< 0.005	< 0.005	< 0.005	5.40
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	1.56	5.62	0.01	0.06	—	0.06	0.06	—	0.06	—	812	812	0.03	0.01	—	815
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.01	0.01	0.08	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.3	41.3	< 0.005	< 0.005	—	41.4
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	< 0.005	< 0.005	0.01	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.84	6.84	< 0.005	< 0.005	—	6.86
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.8	84.8	< 0.005	< 0.005	0.01	85.8
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.9	46.9	< 0.005	0.01	< 0.005	49.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.35	4.35	< 0.005	< 0.005	0.01	4.41
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.39	2.39	< 0.005	< 0.005	< 0.005	2.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.72	0.72	< 0.005	< 0.005	< 0.005	0.73
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.40	0.40	< 0.005	< 0.005	< 0.005	0.41
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.23	1.56	5.62	0.01	0.06	—	0.06	0.05	—	0.05	—	812	812	0.03	0.01	—	814
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.4	25.4	< 0.005	< 0.005	—	25.5
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.21	4.21	< 0.005	< 0.005	—	4.22
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.32	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	83.3	83.3	< 0.005	< 0.005	0.01	84.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.6	45.6	< 0.005	0.01	< 0.005	47.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.63	2.63	< 0.005	< 0.005	< 0.005	2.67
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.44
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.25
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.69	0.57	4.31	5.96	0.01	0.08	—	0.08	0.08	—	0.08	—	712	712	0.03	0.01	—	715
Architectural Coatings	1.03	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.2
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.00	3.00	< 0.005	< 0.005	—	3.01
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.8	84.8	< 0.005	< 0.005	0.01	85.8
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.9	46.9	< 0.005	0.01	< 0.005	49.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.18	2.18	< 0.005	< 0.005	< 0.005	2.20
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.19	1.19	< 0.005	< 0.005	< 0.005	1.25
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.37
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.21
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	0.55	4.24	5.93	0.01	0.07	—	0.07	0.06	—	0.06	—	712	712	0.03	0.01	—	714

Architectural Coating	1.03	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.26	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.2	43.2	< 0.005	< 0.005	—	43.3
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.15	7.15	< 0.005	< 0.005	—	7.18
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.32	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	83.3	83.3	< 0.005	< 0.005	0.01	84.4
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.6	45.6	< 0.005	0.01	< 0.005	47.5

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.10	5.10	< 0.005	< 0.005	0.01	5.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.76	2.76	< 0.005	< 0.005	< 0.005	2.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.84	0.84	< 0.005	< 0.005	< 0.005	0.86
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	12.9	12.9	0.01	< 0.005	—	13.4

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	3.68	3.68	< 0.005	< 0.005	—	3.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5	0.01	< 0.005	—	17.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	12.9	12.9	0.01	< 0.005	—	13.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	3.68	3.68	< 0.005	< 0.005	—	3.84
Total	—	—	—	—	—	—	—	—	—	—	—	—	16.5	16.5	0.01	< 0.005	—	17.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2.13	2.13	< 0.005	< 0.005	—	2.23
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	0.61	0.61	< 0.005	< 0.005	—	0.64

Total	—	—	—	—	—	—	—	—	—	—	—	—	2.74	2.74	< 0.005	< 0.005	—	2.86

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.4	64.4	0.01	< 0.005	—	64.6
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	30.1	30.1	< 0.005	< 0.005	—	30.2
Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.5	94.5	0.01	< 0.005	—	94.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	0.01	< 0.005	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	64.4	64.4	0.01	< 0.005	—	64.6
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	30.1	30.1	< 0.005	< 0.005	—	30.2

Total	0.01	< 0.005	0.08	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.5	94.5	0.01	< 0.005	—	94.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.7
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.98	4.98	< 0.005	< 0.005	—	4.99
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.6	15.6	< 0.005	< 0.005	—	15.7

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.15	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.27	1.27	< 0.005	< 0.005	—	1.28

Total	0.22	0.21	< 0.005	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.27	1.27	< 0.005	< 0.005	—	1.28
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.15	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.16	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10
Total	0.03	0.03	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.10	0.10	< 0.005	< 0.005	—	0.10

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2.39	1.15	3.54	0.25	0.01	—	11.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.49	0.21	0.70	0.05	< 0.005	—	2.31
Total	—	—	—	—	—	—	—	—	—	—	—	2.88	1.36	4.24	0.30	0.01	—	13.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	2.39	1.15	3.54	0.25	0.01	—	11.4
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.49	0.21	0.70	0.05	< 0.005	—	2.31
Total	—	—	—	—	—	—	—	—	—	—	—	2.88	1.36	4.24	0.30	0.01	—	13.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.40	0.19	0.59	0.04	< 0.005	—	1.90

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.08	0.04	0.12	0.01	< 0.005	—	0.38
Total	—	—	—	—	—	—	—	—	—	—	—	0.48	0.23	0.70	0.05	< 0.005	—	2.28

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	3.15	0.00	3.15	0.31	0.00	—	11.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.36	0.00	5.36	0.54	0.00	—	18.7
Total	—	—	—	—	—	—	—	—	—	—	—	8.50	0.00	8.50	0.85	0.00	—	29.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Government	—	—	—	—	—	—	—	—	—	—	—	3.15	0.00	3.15	0.31	0.00	—	11.0
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.36	0.00	5.36	0.54	0.00	—	18.7
Total	—	—	—	—	—	—	—	—	—	—	—	8.50	0.00	8.50	0.85	0.00	—	29.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.52	0.00	0.52	0.05	0.00	—	1.82
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.89	0.00	0.89	0.09	0.00	—	3.10
Total	—	—	—	—	—	—	—	—	—	—	—	1.41	0.00	1.41	0.14	0.00	—	4.92

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Govern Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.31	1.31
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.32	1.32
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.31	1.31
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.32	1.32
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.22	0.22

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.90	0.82	2.29	2.09	< 0.005	0.12	0.00	0.12	0.12	0.00	0.12	0.00	420	420	0.02	< 0.005	0.00	421
Total	0.90	0.82	2.29	2.09	< 0.005	0.12	0.00	0.12	0.12	0.00	0.12	0.00	420	420	0.02	< 0.005	0.00	421

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.90	0.82	2.29	2.09	< 0.005	0.12	0.00	0.12	0.12	0.00	0.12	0.00	420	420	0.02	< 0.005	0.00	421
Total	0.90	0.82	2.29	2.09	< 0.005	0.12	0.00	0.12	0.12	0.00	0.12	0.00	420	420	0.02	< 0.005	0.00	421
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.02	0.02	0.06	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	9.52	9.52	< 0.005	< 0.005	0.00	9.55
Total	0.02	0.02	0.06	0.05	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	9.52	9.52	< 0.005	< 0.005	0.00	9.55

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/1/2027	10/6/2027	5.00	26.0	—
Rock/Riprap Removal	Site Preparation	9/16/2027	10/6/2027	5.00	15.0	—
Restore Beach Access	Grading	10/7/2027	12/1/2027	5.00	40.0	—
Building Construction	Building Construction	12/2/2027	12/5/2028	5.00	264	—
Paving	Paving	12/6/2028	1/16/2029	5.00	30.0	—
Architectural Coating	Architectural Coating	12/19/2028	1/31/2029	5.00	32.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	6.00	8.00	33.0	0.73
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Demolition	Air Compressors	Diesel	Average	8.00	8.00	37.0	0.48

Demolition	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Demolition	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Demolition	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Rock/Riprap Removal	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Rock/Riprap Removal	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Restore Beach Access	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Restore Beach Access	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Restore Beach Access	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Restore Beach Access	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	4.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Construction	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Construction	Skid Steer Loaders	Diesel	Tier 4 Final	1.00	8.00	71.0	0.37
Building Construction	Pumps	Diesel	Average	4.00	8.00	11.0	0.74
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	4.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	54.0	12.0	LDA,LDT1,LDT2
Demolition	Vendor	2.00	7.63	HHDT,MHDT
Demolition	Hauling	10.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Rock/Riprap Removal	—	—	—	—
Rock/Riprap Removal	Worker	6.00	12.0	LDA,LDT1,LDT2
Rock/Riprap Removal	Vendor	2.00	7.63	HHDT,MHDT
Rock/Riprap Removal	Hauling	10.0	20.0	HHDT
Rock/Riprap Removal	Onsite truck	—	—	HHDT
Restore Beach Access	—	—	—	—
Restore Beach Access	Worker	10.0	12.0	LDA,LDT1,LDT2
Restore Beach Access	Vendor	—	7.63	HHDT,MHDT
Restore Beach Access	Hauling	18.0	20.0	HHDT
Restore Beach Access	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	20.0	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	2.00	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	10.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	2.00	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT

Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	10.0	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.00	7.63	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	10,670	3,557	27.6

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	2,559	—
Rock/Riprap Removal	—	1,126	6.00	0.00	—
Restore Beach Access	1,000	5,400	66.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.01

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction

Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Government Office Building	0.00	0%
Other Non-Asphalt Surfaces	0.01	0%
High Turnover (Sit Down Restaurant)	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00	589	0.03	< 0.005
2028	0.00	589	0.03	< 0.005
2029	0.00	589	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	40.0	40.0	40.0	14,610	554	554	554	202,144

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	10,670	3,557	27.6

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Government Office Building	104,181	45.1	0.0330	0.0040	201,041
Other Non-Asphalt Surfaces	0.00	45.1	0.0330	0.0040	0.00
High Turnover (Sit Down Restaurant)	29,745	45.1	0.0330	0.0040	93,859

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Government Office Building	1,247,186	149,442
Other Non-Asphalt Surfaces	0.00	0.00
High Turnover (Sit Down Restaurant)	253,451	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Government Office Building	5.84	—
Other Non-Asphalt Surfaces	0.00	—
High Turnover (Sit Down Restaurant)	9.94	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	1.00	50.0	500	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.71	annual days of extreme heat
Extreme Precipitation	2.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	21.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	29.9

AQ-PM	49.8
AQ-DPM	72.1
Drinking Water	70.4
Lead Risk Housing	12.1
Pesticides	0.00
Toxic Releases	15.0
Traffic	—
Effect Indicators	—
CleanUp Sites	86.2
Groundwater	89.6
Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	91.9
Solid Waste	0.00
Sensitive Population	—
Asthma	29.8
Cardio-vascular	46.8
Low Birth Weights	12.1
Socioeconomic Factor Indicators	—
Education	4.67
Housing	43.9
Linguistic	2.81
Poverty	26.7
Unemployment	8.69

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	58.42422687
Employed	30.82253304
Median HI	39.72796099
Education	—
Bachelor's or higher	69.88322854
High school enrollment	100
Preschool enrollment	5.774412935
Transportation	—
Auto Access	35.49339151
Active commuting	67.45797511
Social	—
2-parent households	85.70511998
Voting	64.7760811
Neighborhood	—
Alcohol availability	19.96663673
Park access	52.67547799
Retail density	41.88374182
Supermarket access	38.88104709
Tree canopy	12.04927499
Housing	—
Homeownership	9.380213012
Housing habitability	36.55844989
Low-inc homeowner severe housing cost burden	26.6521237
Low-inc renter severe housing cost burden	71.07660721
Uncrowded housing	60.05389452
Health Outcomes	—
Insured adults	36.09649686
Arthritis	23.1

Asthma ER Admissions	43.4
High Blood Pressure	43.5
Cancer (excluding skin)	16.1
Asthma	61.7
Coronary Heart Disease	31.2
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	70.5
Life Expectancy at Birth	21.0
Cognitively Disabled	54.2
Physically Disabled	50.9
Heart Attack ER Admissions	43.9
Mental Health Not Good	64.8
Chronic Kidney Disease	45.1
Obesity	60.5
Pedestrian Injuries	66.5
Physical Health Not Good	68.2
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	5.2
Current Smoker	60.5
No Leisure Time for Physical Activity	77.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	37.9
Children	36.4
Elderly	53.1
English Speaking	70.3
Foreign-born	9.1

Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	8.4
Traffic Density	0.0
Traffic Access	55.5
Other Indices	—
Hardship	16.7
Other Decision Support	—
2016 Voting	69.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	21.0
Healthy Places Index Score for Project Location (b)	47.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Information provided by project applicant.
Construction: Construction Phases	Based on timeline provided by project applicant.
Construction: Demolition	Based on project description.
Construction: Trips and VMT	Trips rounded to reflect round trips. Vendor trips added. Haul truck trips rounded based on demolition figures.
Construction: Off-Road Equipment	Applicant provided information. Equipment over 50 hp was modeled as Tier 4 Final in accordance with PDF-AQ-1.
Construction: Dust From Material Movement	applicant provided information
Operations: Vehicle Data	Lifeguard operations are 7 days/week.

Oceanside Beachfront Facilities Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Oceanside Beachfront Facilities
Construction Start Date	2/1/2029
Operational Year	2034
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90
Precipitation (days)	20.6
Location	33.19434987278302, -117.38463999042705
County	San Diego
City	Oceanside
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6200
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.30

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Place of Worship	17.5	1000sqft	0.40	17,507	8,681	—	—	Community Center

Parking Lot	41.0	Space	0.37	0.00	0.00	—	—	—
Place of Worship	17.1	1000sqft	0.39	17,127	1,561	—	—	Amphitheater/Band shell
Other Non-Asphalt Surfaces	3.91	1000sqft	0.09	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.75	1.50	15.7	24.3	0.04	0.33	3.61	3.70	0.30	1.49	1.59	—	5,112	5,112	0.20	0.14	2.11	5,158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	35.4	35.0	15.8	68.8	0.04	0.78	2.91	2.96	0.63	1.40	1.45	—	4,291	4,291	0.17	0.14	0.05	4,336
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.49	2.42	11.2	16.1	0.03	0.23	1.43	1.56	0.22	0.58	0.70	—	3,055	3,055	0.11	0.09	0.57	3,087
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	0.44	2.05	2.95	0.01	0.04	0.26	0.28	0.04	0.11	0.13	—	506	506	0.02	0.02	0.09	511

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.75	0.63	5.44	24.0	0.04	0.12	3.43	3.53	0.11	1.44	1.54	—	4,760	4,760	0.19	0.09	1.63	4,792
2030	0.72	0.62	5.40	9.35	0.02	0.12	0.42	0.54	0.11	0.10	0.21	—	1,894	1,894	0.07	0.08	1.44	1,920
2031	1.75	1.50	15.7	24.3	0.04	0.33	3.61	3.70	0.30	1.49	1.59	—	5,112	5,112	0.20	0.14	2.11	5,158
2032	1.73	1.48	15.7	22.7	0.04	0.32	0.70	1.02	0.30	0.17	0.47	—	4,289	4,289	0.16	0.12	1.84	4,329
2033	1.72	1.47	15.6	22.7	0.04	0.32	0.70	1.02	0.30	0.17	0.47	—	4,262	4,262	0.15	0.12	1.60	4,302
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	35.4	35.0	9.56	68.8	0.04	0.78	2.78	2.81	0.63	1.37	1.40	—	3,777	3,777	0.15	0.08	0.04	3,805
2030	5.04	4.95	5.43	9.20	0.02	0.12	0.42	0.54	0.11	0.10	0.21	—	1,877	1,877	0.07	0.08	0.04	1,902
2031	1.74	1.48	15.8	24.4	0.04	0.33	2.91	2.96	0.30	1.40	1.45	—	4,291	4,291	0.17	0.14	0.05	4,336
2032	1.73	1.47	15.7	22.5	0.04	0.32	0.70	1.02	0.30	0.17	0.47	—	4,262	4,262	0.16	0.13	0.05	4,305
2033	6.04	5.76	15.7	22.6	0.04	0.32	0.70	1.02	0.30	0.17	0.47	—	4,235	4,235	0.15	0.12	0.04	4,273
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	2.49	2.42	2.90	12.3	0.02	0.11	1.11	1.22	0.09	0.46	0.55	—	1,887	1,887	0.07	0.05	0.36	1,904
2030	0.65	0.58	3.34	6.03	0.01	0.07	0.26	0.33	0.07	0.06	0.13	—	1,203	1,203	0.04	0.05	0.39	1,219
2031	0.77	0.67	6.06	14.3	0.03	0.13	1.43	1.56	0.12	0.58	0.70	—	2,843	2,843	0.11	0.08	0.46	2,869
2032	1.24	1.05	11.2	16.1	0.03	0.23	0.49	0.73	0.22	0.12	0.34	—	3,055	3,055	0.11	0.09	0.57	3,087
2033	1.23	1.09	7.94	13.5	0.02	0.17	0.34	0.51	0.16	0.08	0.24	—	2,407	2,407	0.09	0.06	0.34	2,428
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.45	0.44	0.53	2.25	< 0.005	0.02	0.20	0.22	0.02	0.08	0.10	—	312	312	0.01	0.01	0.06	315
2030	0.12	0.11	0.61	1.10	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	—	199	199	0.01	0.01	0.06	202
2031	0.14	0.12	1.11	2.62	< 0.005	0.02	0.26	0.28	0.02	0.11	0.13	—	471	471	0.02	0.01	0.08	475
2032	0.23	0.19	2.05	2.95	0.01	0.04	0.09	0.13	0.04	0.02	0.06	—	506	506	0.02	0.02	0.09	511
2033	0.22	0.20	1.45	2.47	< 0.005	0.03	0.06	0.09	0.03	0.02	0.04	—	399	399	0.01	0.01	0.06	402

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.06	1.04	0.01	1.51	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	118	210	328	11.9	0.03	0.13	635
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118	204	322	11.9	0.03	0.13	628
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.92	0.91	0.01	0.74	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	118	207	325	11.9	0.03	0.13	631
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	0.17	< 0.005	0.14	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	19.5	34.3	53.8	1.96	0.01	0.02	105

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	1.06	1.04	0.01	1.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.19	6.19	< 0.005	< 0.005	—	6.22
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	185	185	0.04	< 0.005	—	187
Water	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Waste	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13

Total	1.06	1.04	0.01	1.51	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	118	210	328	11.9	0.03	0.13	635
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	185	185	0.04	< 0.005	—	187
Water	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Waste	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118	204	322	11.9	0.03	0.13	628
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.92	0.91	0.01	0.74	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.05	3.05	< 0.005	< 0.005	—	3.07
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	185	185	0.04	< 0.005	—	187
Water	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Waste	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	0.92	0.91	0.01	0.74	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	118	207	325	11.9	0.03	0.13	631
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.17	0.17	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.51	0.51	< 0.005	< 0.005	—	0.51
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	30.6	30.6	0.01	< 0.005	—	31.0
Water	—	—	—	—	—	—	—	—	—	—	—	1.90	3.18	5.08	0.20	< 0.005	—	11.4
Waste	—	—	—	—	—	—	—	—	—	—	—	17.6	0.00	17.6	1.76	0.00	—	61.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	0.17	0.17	< 0.005	0.14	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	19.5	34.3	53.8	1.96	0.01	0.02	105

3. Construction Emissions Details

3.1. Demolition - JSBCC (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	35.3	35.0	9.12	68.0	0.04	0.78	—	0.78	0.62	—	0.62	—	3,298	3,298	0.13	0.03	—	3,310
Demolition	—	—	—	—	—	—	0.30	0.30	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.13	2.11	0.55	4.10	< 0.005	0.05	—	0.05	0.04	—	0.04	—	199	199	0.01	< 0.005	—	199
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.39	0.38	0.10	0.75	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.9	32.9	< 0.005	< 0.005	—	33.0
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.64	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	< 0.005	0.01	0.01	169
Vendor	0.01	0.01	0.23	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	182	182	0.01	0.03	0.01	190
Hauling	0.01	< 0.005	0.17	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	130	130	0.01	0.02	0.01	136
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.3
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.01	11.5
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.83	7.83	< 0.005	< 0.005	0.01	8.22
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.68	1.68	< 0.005	< 0.005	< 0.005	1.70
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.90
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.36

3.3. Demolition - Amphitheater & Bandshell (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.28	10.9	23.4	0.04	0.20	—	0.20	0.19	—	0.19	—	3,706	3,706	0.15	0.03	—	3,719
Demolition	—	—	—	—	—	—	0.45	0.45	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.31	2.83	< 0.005	0.02	—	0.02	0.02	—	0.02	—	447	447	0.02	< 0.005	—	448
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	74.0	74.0	< 0.005	< 0.005	—	74.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.73	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	209	209	< 0.005	0.01	0.01	212
Vendor	0.01	0.01	0.26	0.13	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	213	213	0.01	0.03	0.01	222
Hauling	0.01	< 0.005	0.16	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	0.01	0.02	< 0.005	129
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.4	25.4	< 0.005	< 0.005	0.03	25.8
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.7	25.7	< 0.005	< 0.005	0.02	26.8
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.01	15.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.21	4.21	< 0.005	< 0.005	< 0.005	4.27
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.25	4.25	< 0.005	< 0.005	< 0.005	4.44
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.57

3.5. Site Preparation - JSBCC (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.82	8.76	0.02	0.03	—	0.03	0.03	—	0.03	—	1,669	1,669	0.07	0.01	—	1,674
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.82	8.76	0.02	0.03	—	0.03	0.03	—	0.03	—	1,669	1,669	0.07	0.01	—	1,674
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.10	1.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	201	201	0.01	< 0.005	—	202
Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	33.3	33.3	< 0.005	< 0.005	—	33.4
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.73	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	176	176	< 0.005	0.01	0.48	179
Vendor	0.01	0.01	0.22	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	182	182	0.01	0.03	0.34	190
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.64	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	167	167	< 0.005	0.01	0.01	169
Vendor	0.01	0.01	0.23	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	182	182	0.01	0.03	0.01	190
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	20.3	20.3	< 0.005	< 0.005	0.03	20.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.0	22.0	< 0.005	< 0.005	0.02	22.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.36	3.36	< 0.005	< 0.005	< 0.005	3.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.64	3.64	< 0.005	< 0.005	< 0.005	3.80
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Site Preparation - Amphitheater & Bandshell (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.24	0.22	1.57	8.65	0.02	0.05	—	0.05	0.04	—	0.04	—	1,669	1,669	0.07	0.01	—	1,674
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.22	1.57	8.65	0.02	0.05	—	0.05	0.04	—	0.04	—	1,669	1,669	0.07	0.01	—	1,674
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.28	1.56	< 0.005	0.01	—	0.01	0.01	—	0.01	—	302	302	0.01	< 0.005	—	303
Dust From Material Movement	—	—	—	—	—	—	0.46	0.46	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.0	50.0	< 0.005	< 0.005	—	50.1

Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	0.97	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	255	255	< 0.005	0.01	0.58	259
Vendor	0.02	0.01	0.40	0.20	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	341	341	0.01	0.05	0.51	356
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	0.84	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	241	241	< 0.005	0.01	0.01	244
Vendor	0.02	0.01	0.42	0.20	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	341	341	0.01	0.05	0.01	356
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.0	44.0	< 0.005	< 0.005	0.05	44.6
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	61.6	61.6	< 0.005	0.01	0.04	64.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.29	7.29	< 0.005	< 0.005	0.01	7.38
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving - Amphitheater & Bandshell (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.11	0.96	7.24	21.7	0.03	0.24	—	0.24	0.22	—	0.22	—	3,164	3,164	0.13	0.03	—	3,175
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.11	0.96	7.24	21.7	0.03	0.24	—	0.24	0.22	—	0.22	—	3,164	3,164	0.13	0.03	—	3,175
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.31	3.92	0.01	0.04	—	0.04	0.04	—	0.04	—	572	572	0.02	< 0.005	—	574
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.24	0.72	< 0.005	0.01	—	0.01	0.01	—	0.01	—	94.7	94.7	< 0.005	< 0.005	—	95.0
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.05	0.87	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	249	249	< 0.005	< 0.005	0.45	250
Vendor	0.02	0.01	0.37	0.19	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	317	317	0.01	0.05	0.37	332
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.06	0.76	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	235	235	< 0.005	< 0.005	0.01	236
Vendor	0.02	0.01	0.39	0.19	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	318	318	0.01	0.05	0.01	332
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.14	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.9	42.9	< 0.005	< 0.005	0.04	43.0
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	57.4	57.4	< 0.005	0.01	0.03	60.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.10	7.10	< 0.005	< 0.005	0.01	7.13

Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.51	9.51	< 0.005	< 0.005	< 0.005	9.93
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Grading - JSBCC (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.48	2.82	23.0	0.04	0.10	—	0.10	0.09	—	0.09	—	4,271	4,271	0.17	0.03	—	4,286
Dust From Material Movement	—	—	—	—	—	—	3.18	3.18	—	1.38	1.38	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.09	0.51	4.17	0.01	0.02	—	0.02	0.02	—	0.02	—	772	772	0.03	0.01	—	775
Dust From Material Movement	—	—	—	—	—	—	0.57	0.57	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.09	0.76	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	128	128	0.01	< 0.005	—	128
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.04	0.73	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	176	176	< 0.005	0.01	0.48	179
Vendor	0.01	0.01	0.22	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	182	182	0.01	0.03	0.34	190
Hauling	0.01	< 0.005	0.16	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	130	130	0.01	0.02	0.23	137
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.4	30.4	< 0.005	< 0.005	0.04	30.8
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.9	32.9	< 0.005	< 0.005	0.03	34.4
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.02	24.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.03	5.03	< 0.005	< 0.005	0.01	5.10
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.45	5.45	< 0.005	< 0.005	< 0.005	5.69
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	< 0.005	4.08

3.13. Grading - Amphitheater & Bandshell (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.46	2.82	23.0	0.04	0.09	—	0.09	0.09	—	0.09	—	4,271	4,271	0.17	0.03	—	4,286
Dust From Material Movement	—	—	—	—	—	—	3.18	3.18	—	1.38	1.38	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.51	4.17	0.01	0.02	—	0.02	0.02	—	0.02	—	772	772	0.03	0.01	—	775
Dust From Material Movement	—	—	—	—	—	—	0.57	0.57	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.09	0.76	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	128	128	0.01	< 0.005	—	128

Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.06	0.97	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	255	255	< 0.005	0.01	0.58	259
Vendor	0.02	0.01	0.40	0.20	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	341	341	0.01	0.05	0.51	356
Hauling	0.01	< 0.005	0.30	0.13	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	245	245	0.01	0.04	0.38	257
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.0	44.0	< 0.005	< 0.005	0.05	44.6
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	61.6	61.6	< 0.005	0.01	0.04	64.3
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.3	44.3	< 0.005	0.01	0.03	46.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.29	7.29	< 0.005	< 0.005	0.01	7.38
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.6
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.33	7.33	< 0.005	< 0.005	< 0.005	7.70

3.15. Building Construction - JSBCC (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.87	7.89	0.01	0.12	—	0.12	0.11	—	0.11	—	1,184	1,184	0.05	0.01	—	1,188
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.87	7.89	0.01	0.12	—	0.12	0.11	—	0.11	—	1,184	1,184	0.05	0.01	—	1,188
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.15	1.43	2.32	< 0.005	0.03	—	0.03	0.03	—	0.03	—	348	348	0.01	< 0.005	—	349
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.26	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57.6	57.6	< 0.005	< 0.005	—	57.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.13	0.12	0.08	1.32	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	318	318	< 0.005	0.01	0.87	322
Vendor	0.03	0.01	0.49	0.24	< 0.005	0.01	0.12	0.12	< 0.005	0.03	0.03	—	410	410	0.02	0.06	0.76	428
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.09	1.15	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	300	300	0.01	0.01	0.02	304
Vendor	0.03	0.01	0.51	0.24	< 0.005	0.01	0.12	0.12	< 0.005	0.03	0.03	—	410	410	0.02	0.06	0.02	428
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.34	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	88.8	88.8	< 0.005	< 0.005	0.11	90.0
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	120	120	< 0.005	0.02	0.10	126
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.02	14.9
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.9	19.9	< 0.005	< 0.005	0.02	20.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction - JSBCC (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.49	4.85	7.88	0.01	0.11	—	0.11	0.11	—	0.11	—	1,184	1,184	0.05	0.01	—	1,189

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.49	4.85	7.88	0.01	0.11	—	0.11	0.11	—	0.11	—	1,184	1,184	0.05	0.01	—	1,189
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.68	4.35	0.01	0.06	—	0.06	0.06	—	0.06	—	654	654	0.03	0.01	—	656
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	108	108	< 0.005	< 0.005	—	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.08	1.24	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	312	312	< 0.005	0.01	0.78	317
Vendor	0.03	0.01	0.47	0.23	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	397	397	0.01	0.06	0.67	415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.12	0.11	0.09	1.08	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	295	295	0.01	0.01	0.02	299
Vendor	0.03	0.01	0.49	0.24	< 0.005	< 0.005	0.12	0.12	< 0.005	0.03	0.03	—	397	397	0.01	0.06	0.02	415
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.60	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.19	166
Vendor	0.02	0.01	0.27	0.13	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	219	219	0.01	0.03	0.16	229
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.2	27.2	< 0.005	< 0.005	0.03	27.6
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.3	36.3	< 0.005	0.01	0.03	37.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Building Construction - Amphitheater & Bandshell (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.52	1.30	14.9	20.6	0.03	0.32	—	0.32	0.30	—	0.30	—	3,169	3,169	0.13	0.03	—	3,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.52	1.30	14.9	20.6	0.03	0.32	—	0.32	0.30	—	0.30	—	3,169	3,169	0.13	0.03	—	3,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.30	3.46	4.79	0.01	0.08	—	0.08	0.07	—	0.07	—	738	738	0.03	0.01	—	741
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	0.63	0.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	122	122	< 0.005	< 0.005	—	123
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.18	0.11	1.93	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	511	511	0.01	0.02	1.15	518
Vendor	0.05	0.02	0.75	0.37	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	639	639	0.02	0.09	0.96	667
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.16	0.13	1.68	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	482	482	0.01	0.02	0.03	489
Vendor	0.04	0.02	0.78	0.38	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	639	639	0.02	0.09	0.02	667
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.40	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	113	113	< 0.005	< 0.005	0.12	115
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	149	149	< 0.005	0.02	0.10	155
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.8	18.8	< 0.005	< 0.005	0.02	19.0
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	24.6	24.6	< 0.005	< 0.005	0.02	25.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Building Construction - Amphitheater & Bandshell (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	1.30	14.8	20.6	0.03	0.32	—	0.32	0.30	—	0.30	—	3,169	3,169	0.13	0.03	—	3,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	1.30	14.8	20.6	0.03	0.32	—	0.32	0.30	—	0.30	—	3,169	3,169	0.13	0.03	—	3,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.93	10.6	14.7	0.02	0.23	—	0.23	0.21	—	0.21	—	2,270	2,270	0.09	0.02	—	2,278
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.17	1.94	2.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	376	376	0.02	< 0.005	—	377
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.16	0.11	1.82	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	503	503	0.01	< 0.005	1.02	506
Vendor	0.04	0.02	0.72	0.36	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	617	617	0.02	0.09	0.82	644
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.16	0.11	1.60	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	475	475	0.01	0.02	0.03	481
Vendor	0.04	0.02	0.75	0.37	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	617	617	0.02	0.09	0.02	643
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.08	1.16	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	344	344	0.01	0.01	0.32	348
Vendor	0.03	0.01	0.53	0.26	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	—	442	442	0.02	0.06	0.25	461
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.01	0.21	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	56.9	56.9	< 0.005	< 0.005	0.05	57.6
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	73.2	73.2	< 0.005	0.01	0.04	76.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Building Construction - Amphitheater & Bandshell (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	1.29	14.8	20.6	0.03	0.32	—	0.32	0.29	—	0.29	—	3,169	3,169	0.13	0.03	—	3,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	1.29	14.8	20.6	0.03	0.32	—	0.32	0.29	—	0.29	—	3,169	3,169	0.13	0.03	—	3,180
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.49	5.60	7.76	0.01	0.12	—	0.12	0.11	—	0.11	—	1,197	1,197	0.05	0.01	—	1,201
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	1.02	1.42	< 0.005	0.02	—	0.02	0.02	—	0.02	—	198	198	0.01	< 0.005	—	199
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.09	1.74	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	498	498	0.01	< 0.005	0.90	500
Vendor	0.04	0.02	0.69	0.35	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	595	595	0.02	0.09	0.70	622
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.11	1.52	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	470	470	0.01	< 0.005	0.02	471
Vendor	0.04	0.02	0.72	0.36	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	596	596	0.02	0.09	0.02	622
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.58	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	179	179	< 0.005	< 0.005	0.15	180
Vendor	0.02	0.01	0.27	0.13	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	225	225	0.01	0.03	0.11	235
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.7	29.7	< 0.005	< 0.005	0.02	29.8
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.2	37.2	< 0.005	0.01	0.02	38.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Paving - JSBCC (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.23	1.55	5.61	0.01	0.06	—	0.06	0.05	—	0.05	—	812	812	0.03	0.01	—	814
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.19	0.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	97.8	97.8	< 0.005	< 0.005	—	98.2
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.2	16.2	< 0.005	< 0.005	—	16.3
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.48	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	131	131	< 0.005	0.01	0.01	133
Vendor	0.01	0.01	0.22	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	177	177	0.01	0.03	0.01	184
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.9	15.9	< 0.005	< 0.005	0.02	16.2
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.3	21.3	< 0.005	< 0.005	0.02	22.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.64	2.64	< 0.005	< 0.005	< 0.005	2.68
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	< 0.005	3.68
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Architectural Coating - JSBCC (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	0.39	3.14	4.43	0.01	0.04	—	0.04	0.04	—	0.04	—	534	534	0.02	< 0.005	—	536
Architectural Coatings	4.52	4.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.9	21.9	< 0.005	< 0.005	—	22.0
Architectural Coatings	0.19	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.63	3.63	< 0.005	< 0.005	—	3.65
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.30	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	81.9	81.9	< 0.005	< 0.005	0.01	83.0
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	132	132	< 0.005	0.02	0.01	138
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.44
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.44	5.44	< 0.005	< 0.005	< 0.005	5.68
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.90	0.90	< 0.005	< 0.005	< 0.005	0.94
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Architectural Coating - Amphitheater & Bandshell (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.48	1.22	10.2	14.7	0.02	0.09	—	0.09	0.09	—	0.09	—	1,780	1,780	0.07	0.01	—	1,786

Architectural Coating	4.47	4.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.61	0.88	< 0.005	0.01	—	0.01	0.01	—	0.01	—	107	107	< 0.005	< 0.005	—	108
Architectural Coatings	0.27	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.8	17.8	< 0.005	< 0.005	—	17.8
Architectural Coatings	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.66	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	204	204	< 0.005	< 0.005	0.01	204
Vendor	0.02	0.01	0.29	0.14	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	238	238	0.01	0.03	0.01	249

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	12.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.01	15.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.05	2.05	< 0.005	< 0.005	< 0.005	2.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.38	2.38	< 0.005	< 0.005	< 0.005	2.48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.03	< 0.005	—	181
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	6.54	6.54	< 0.005	< 0.005	—	6.62

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	185	185	0.04	< 0.005	—	187
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	178	178	0.03	< 0.005	—	181
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	6.54	6.54	< 0.005	< 0.005	—	6.62
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	185	185	0.04	< 0.005	—	187
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	29.5	29.5	0.01	< 0.005	—	29.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	1.08	1.08	< 0.005	< 0.005	—	1.10
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	30.6	30.6	0.01	< 0.005	—	31.0

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.74	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.27	0.25	0.01	1.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.19	6.19	< 0.005	< 0.005	—	6.22
Total	1.06	1.04	0.01	1.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.19	6.19	< 0.005	< 0.005	—	6.22
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.74	0.74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.02	0.02	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.51	0.51	< 0.005	< 0.005	—	0.51
Total	0.17	0.17	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.51	0.51	< 0.005	< 0.005	—	0.51

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	11.5	19.2	30.7	1.18	0.03	—	68.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1.90	3.18	5.08	0.20	< 0.005	—	11.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.90	3.18	5.08	0.20	< 0.005	—	11.4

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	106	0.00	106	10.6	0.00	—	372
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	17.6	0.00	17.6	1.76	0.00	—	61.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	17.6	0.00	17.6	1.76	0.00	—	61.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition - JSBCC	Demolition	2/1/2029	3/2/2029	5.00	22.0	—
Demolition - Amphitheater & Bandshell	Demolition	1/1/2031	3/3/2031	5.00	44.0	—
Site Preparation - JSBCC	Site Preparation	3/3/2029	5/3/2029	5.00	44.0	—
Site Preparation - Amphitheater & Bandshell	Site Preparation	3/4/2031	6/3/2031	5.00	66.0	—
Paving - Amphitheater & Bandshell	Site Preparation	7/13/2033	10/12/2033	5.00	66.0	—
Grading - JSBCC	Grading	5/4/2029	8/3/2029	5.00	66.0	—
Grading - Amphitheater & Bandshell	Grading	6/4/2031	9/3/2031	5.00	66.0	—
Building Construction - JSBCC	Building Construction	8/4/2029	10/9/2030	5.00	308	—
Building Construction - Amphitheater & Bandshell	Building Construction	9/4/2031	7/12/2033	5.00	484	—
Paving - JSBCC	Paving	10/10/2030	12/10/2030	5.00	44.0	—
Architectural Coating - JSBCC	Architectural Coating	12/11/2030	12/31/2030	5.00	15.0	—
Architectural Coating - Amphitheater & Bandshell	Architectural Coating	10/13/2033	11/11/2033	5.00	22.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition - JSBCC	Concrete/Industrial Saws	Diesel	Average	2.00	8.00	33.0	0.73

Demolition - JSBCC	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Demolition - JSBCC	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Demolition - JSBCC	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Demolition - JSBCC	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Demolition - JSBCC	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Demolition - JSBCC	Crushing/Proc. Equipment	Gasoline	Average	1.00	8.00	12.0	0.85
Demolition - JSBCC	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition - Amphitheater & Bandshell	Concrete/Industrial Saws	Diesel	Average	4.00	8.00	33.0	0.73
Demolition - Amphitheater & Bandshell	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Demolition - Amphitheater & Bandshell	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Demolition - Amphitheater & Bandshell	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Demolition - Amphitheater & Bandshell	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Demolition - Amphitheater & Bandshell	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition - Amphitheater & Bandshell	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Site Preparation - JSBCC	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Site Preparation - JSBCC	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40

Site Preparation - Amphitheater & Bandshell	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Site Preparation - Amphitheater & Bandshell	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving - Amphitheater & Bandshell	Cement and Mortar Mixers	Diesel	Average	5.00	8.00	10.0	0.56
Paving - Amphitheater & Bandshell	Pavers	Diesel	Tier 4 Final	5.00	8.00	81.0	0.42
Paving - Amphitheater & Bandshell	Rollers	Diesel	Average	5.00	8.00	36.0	0.38
Paving - Amphitheater & Bandshell	Paving Equipment	Diesel	Tier 4 Final	2.00	8.00	89.0	0.36
Grading - JSBCC	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading - JSBCC	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading - JSBCC	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading - JSBCC	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading - JSBCC	Scrapers	Diesel	Tier 4 Final	1.00	8.00	423	0.48
Grading - Amphitheater & Bandshell	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading - Amphitheater & Bandshell	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading - Amphitheater & Bandshell	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading - Amphitheater & Bandshell	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading - Amphitheater & Bandshell	Scrapers	Diesel	Tier 4 Final	1.00	8.00	423	0.48

Building Construction - JSBCC	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Construction - JSBCC	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction - JSBCC	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Construction - JSBCC	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction - JSBCC	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Construction - JSBCC	Skid Steer Loaders	Diesel	Tier 4 Final	1.00	8.00	71.0	0.37
Building Construction - Amphitheater & Bandshell	Forklifts	Diesel	Tier 4 Final	2.00	6.00	82.0	0.20
Building Construction - Amphitheater & Bandshell	Generator Sets	Diesel	Average	5.00	8.00	14.0	0.74
Building Construction - Amphitheater & Bandshell	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Building Construction - Amphitheater & Bandshell	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction - Amphitheater & Bandshell	Skid Steer Loaders	Diesel	Tier 4 Final	5.00	8.00	71.0	0.37
Building Construction - Amphitheater & Bandshell	Pumps	Diesel	Average	5.00	8.00	11.0	0.74
Paving - JSBCC	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving - JSBCC	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving - JSBCC	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving - JSBCC	Rollers	Diesel	Average	1.00	8.00	36.0	0.38

Architectural Coating - JSBCC	Air Compressors	Diesel	Average	3.00	8.00	37.0	0.48
Architectural Coating - Amphitheater & Bandshell	Air Compressors	Diesel	Average	10.0	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition - JSBCC	—	—	—	—
Demolition - JSBCC	Worker	20.0	12.0	LDA,LDT1,LDT2
Demolition - JSBCC	Vendor	8.00	7.63	HHDT,MHDT
Demolition - JSBCC	Hauling	2.00	20.0	HHDT
Demolition - JSBCC	Onsite truck	—	—	HHDT
Site Preparation - JSBCC	—	—	—	—
Site Preparation - JSBCC	Worker	20.0	12.0	LDA,LDT1,LDT2
Site Preparation - JSBCC	Vendor	8.00	7.63	HHDT,MHDT
Site Preparation - JSBCC	Hauling	0.00	20.0	HHDT
Site Preparation - JSBCC	Onsite truck	—	—	HHDT
Grading - JSBCC	—	—	—	—
Grading - JSBCC	Worker	20.0	12.0	LDA,LDT1,LDT2
Grading - JSBCC	Vendor	8.00	7.63	HHDT,MHDT
Grading - JSBCC	Hauling	2.00	20.0	HHDT
Grading - JSBCC	Onsite truck	—	—	HHDT
Building Construction - JSBCC	—	—	—	—
Building Construction - JSBCC	Worker	36.0	12.0	LDA,LDT1,LDT2
Building Construction - JSBCC	Vendor	18.0	7.63	HHDT,MHDT
Building Construction - JSBCC	Hauling	0.00	20.0	HHDT

Building Construction - JSBCC	Onsite truck	—	—	HHDT
Paving - JSBCC	—	—	—	—
Paving - JSBCC	Worker	16.0	12.0	LDA,LDT1,LDT2
Paving - JSBCC	Vendor	8.00	7.63	HHDT,MHDT
Paving - JSBCC	Hauling	0.00	20.0	HHDT
Paving - JSBCC	Onsite truck	—	—	HHDT
Architectural Coating - JSBCC	—	—	—	—
Architectural Coating - JSBCC	Worker	10.0	12.0	LDA,LDT1,LDT2
Architectural Coating - JSBCC	Vendor	6.00	7.63	HHDT,MHDT
Architectural Coating - JSBCC	Hauling	0.00	20.0	HHDT
Architectural Coating - JSBCC	Onsite truck	—	—	HHDT
Demolition - Amphitheater & Bandshell	—	—	—	—
Demolition - Amphitheater & Bandshell	Worker	26.0	12.0	LDA,LDT1,LDT2
Demolition - Amphitheater & Bandshell	Vendor	10.0	7.63	HHDT,MHDT
Demolition - Amphitheater & Bandshell	Hauling	2.00	20.0	HHDT
Demolition - Amphitheater & Bandshell	Onsite truck	—	—	HHDT
Site Preparation - Amphitheater & Bandshell	—	—	—	—
Site Preparation - Amphitheater & Bandshell	Worker	30.0	12.0	LDA,LDT1,LDT2
Site Preparation - Amphitheater & Bandshell	Vendor	16.0	7.63	HHDT,MHDT
Site Preparation - Amphitheater & Bandshell	Hauling	0.00	20.0	HHDT
Site Preparation - Amphitheater & Bandshell	Onsite truck	—	—	HHDT
Grading - Amphitheater & Bandshell	—	—	—	—

Grading - Amphitheater & Bandshell	Worker	30.0	12.0	LDA,LDT1,LDT2
Grading - Amphitheater & Bandshell	Vendor	16.0	7.63	HHDT,MHDT
Grading - Amphitheater & Bandshell	Hauling	4.00	20.0	HHDT
Grading - Amphitheater & Bandshell	Onsite truck	—	—	HHDT
Building Construction - Amphitheater & Bandshell	—	—	—	—
Building Construction - Amphitheater & Bandshell	Worker	60.0	12.0	LDA,LDT1,LDT2
Building Construction - Amphitheater & Bandshell	Vendor	30.0	7.63	HHDT,MHDT
Building Construction - Amphitheater & Bandshell	Hauling	0.00	20.0	HHDT
Building Construction - Amphitheater & Bandshell	Onsite truck	—	—	HHDT
Architectural Coating - Amphitheater & Bandshell	—	—	—	—
Architectural Coating - Amphitheater & Bandshell	Worker	26.0	12.0	LDA,LDT1,LDT2
Architectural Coating - Amphitheater & Bandshell	Vendor	12.0	7.63	HHDT,MHDT
Architectural Coating - Amphitheater & Bandshell	Hauling	0.00	20.0	HHDT
Architectural Coating - Amphitheater & Bandshell	Onsite truck	—	—	HHDT
Paving - Amphitheater & Bandshell	—	—	—	—
Paving - Amphitheater & Bandshell	Worker	30.0	12.0	LDA,LDT1,LDT2
Paving - Amphitheater & Bandshell	Vendor	16.0	7.63	HHDT,MHDT
Paving - Amphitheater & Bandshell	Hauling	0.00	20.0	HHDT
Paving - Amphitheater & Bandshell	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating - JSBCC	0.00	0.00	21,204	7,068	489
Architectural Coating - Amphitheater & Bandshell	0.00	0.00	30,747	10,249	710

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition - JSBCC	0.00	0.00	0.00	315	—
Demolition - Amphitheater & Bandshell	0.00	0.00	0.00	938	—
Site Preparation - JSBCC	—	—	22.0	0.00	—
Site Preparation - Amphitheater & Bandshell	—	—	33.0	0.00	—
Paving - Amphitheater & Bandshell	—	—	0.00	0.00	—
Grading - JSBCC	—	712	132	0.00	—
Grading - Amphitheater & Bandshell	—	1,589	132	0.00	—
Paving - JSBCC	0.00	0.00	0.00	0.00	0.46

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction

Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Place of Worship	0.00	0%
Parking Lot	0.37	100%
Place of Worship	0.00	0%
Other Non-Asphalt Surfaces	0.09	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2029	0.00	589	0.03	< 0.005
2030	0.00	589	0.03	< 0.005
2031	0.00	589	0.03	< 0.005
2032	0.00	589	0.03	< 0.005
2033	0.00	589	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	51,951	17,317	1,199

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Place of Worship	231,986	170	0.0330	0.0040	0.00
Parking Lot	14,081	170	0.0330	0.0040	0.00
Place of Worship	151,983	170	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	170	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Place of Worship	1,000,000	39,500
Parking Lot	0.00	0.00

Place of Worship	5,000,000	52,000
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Place of Worship	99.8	—
Parking Lot	0.00	—
Place of Worship	97.6	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.71	annual days of extreme heat
Extreme Precipitation	2.95	annual days with precipitation above 20 mm
Sea Level Rise	1.51	meters of inundation depth
Wildfire	21.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	—
AQ-PM	—
AQ-DPM	—
Drinking Water	—
Lead Risk Housing	—
Pesticides	—
Toxic Releases	—
Traffic	—
Effect Indicators	—
CleanUp Sites	—
Groundwater	—
Haz Waste Facilities/Generators	—
Impaired Water Bodies	—
Solid Waste	—
Sensitive Population	—
Asthma	—
Cardio-vascular	—
Low Birth Weights	—

Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	—
Unemployment	—

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	58.42422687
Employed	30.82253304
Median HI	39.72796099
Education	—
Bachelor's or higher	69.88322854
High school enrollment	100
Preschool enrollment	5.774412935
Transportation	—
Auto Access	35.49339151
Active commuting	67.45797511
Social	—
2-parent households	85.70511998
Voting	64.7760811
Neighborhood	—
Alcohol availability	19.96663673
Park access	52.67547799
Retail density	41.88374182

Supermarket access	38.88104709
Tree canopy	12.04927499
Housing	—
Homeownership	9.380213012
Housing habitability	36.55844989
Low-inc homeowner severe housing cost burden	26.6521237
Low-inc renter severe housing cost burden	71.07660721
Uncrowded housing	60.05389452
Health Outcomes	—
Insured adults	36.09649686
Arthritis	23.1
Asthma ER Admissions	43.4
High Blood Pressure	43.5
Cancer (excluding skin)	16.1
Asthma	61.7
Coronary Heart Disease	31.2
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	70.5
Life Expectancy at Birth	21.0
Cognitively Disabled	54.2
Physically Disabled	50.9
Heart Attack ER Admissions	43.9
Mental Health Not Good	64.8
Chronic Kidney Disease	45.1
Obesity	60.5
Pedestrian Injuries	66.5
Physical Health Not Good	68.2
Stroke	51.7

Health Risk Behaviors	—
Binge Drinking	5.2
Current Smoker	60.5
No Leisure Time for Physical Activity	77.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	37.9
Children	36.4
Elderly	53.1
English Speaking	70.3
Foreign-born	9.1
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	8.4
Traffic Density	0.0
Traffic Access	55.5
Other Indices	—
Hardship	16.7
Other Decision Support	—
2016 Voting	69.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	—
Healthy Places Index Score for Project Location (b)	47.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on information provided by the applicant.
Construction: Construction Phases	Combined schedule for both of the Community Center and Amphitheater/Bandshell sites. Paving phase represents the combined activity of both sites.
Construction: Off-Road Equipment	Equipment list provided by project applicant. Combined paving phase includes equipment for both Community Center and Amphitheater/Bandshell constructions. Equipment over 50 hp modeled Tier 4 Final in accordance with PDF-AQ-1.
Construction: Trips and VMT	Worker and truck trips are based on information provided by applicant. Haul truck trips are based on calculations for demolition and grading.
Operations: Energy Use	Applicant provided more accurate electricity consumption figures based on specific land uses.
Operations: Water and Waste Water	Applicant provided more accurate water consumption figures based on specific land uses.