ATTACHMENT G

UDSP EIR 2025 ADDENDUM - APPENDIX D - GHG ANALYSIS

APPENDIX D

Greenhouse Gas Analysis

GREENHOUSE GAS ASSESSMENT

Cube Smart Self Storage Facility
City of San Marcos, CA

Prepared for:

City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

Prepared By:

Ldn Consulting, Inc.
23811 Washington Ave, C110-333
Murrieta, California 92562

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1.0 INTRODUCTION

1.1 Project Location and Description

The proposed CubeSmart project includes the construction of a new self-storage facility on approximately 3-acres. The storage facility would provide 104,600 square feet (SF) of storage space within a 3-story building (Building A) and 6,600 SF of storage space within a 1-story building (Building B) for a combined size of 111,200 SF. An office is proposed within the 3-story building. The project site configuration is provided in Figure 1-A and shows the proposed site configuration. Full operations are expected sometime in 2026.

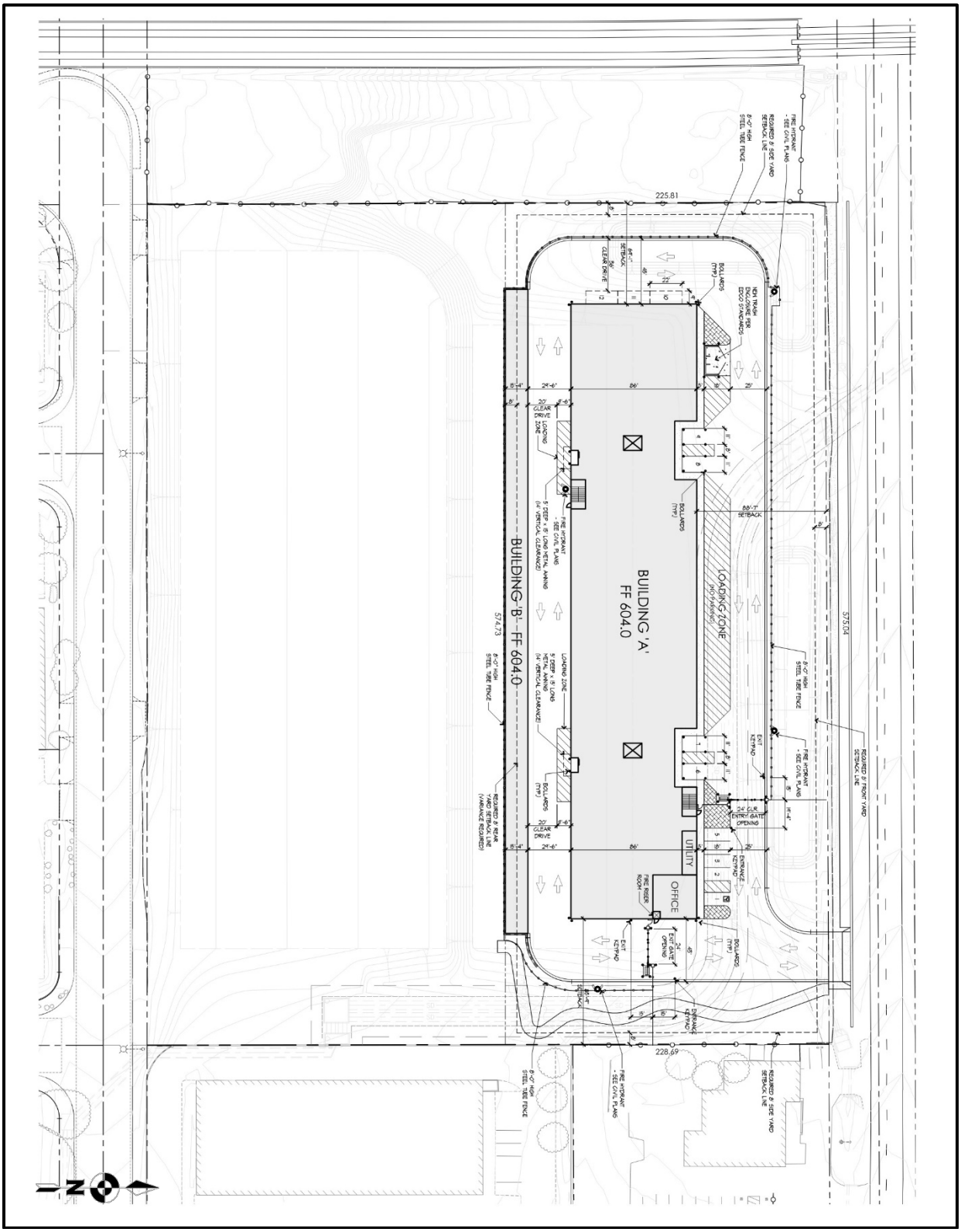
The proposed project is generally located south of State Route 78 (SR-78), south along Carmel Street, and north of Enterprise Street between Industrial Avenue and Venture Street within the University District Specific Plan (UDSP) in the City of San Marcos CA. The San Diego Northern Railroad (SDNR) consisting of Sprinter service operated by the North County Transit District is located adjacent to the Project to the west. The project vicinity can be seen in Figure 1-B.

1.2 Purpose of this Report

The purpose of this Greenhouse Gas (GHG) Assessment is to analyze the project's GHG emissions and evaluate its conformance with the City of San Marcos' Climate Action Plan (CAP). As described in the City's CAP, there is an existing framework of federal, State, regional, and local policies and regulations that identify GHG reduction requirements. The CAP provides a plan for the City to meet these requirements and achieve local reduction requirements outlined in the CAP. In addition, as identified in the CAP, showing consistency with the CAP would also demonstrate that the proposed Project would have a less than significant impact under the California Environmental Quality Act (CEQA) (City of San Marcos, 2020).

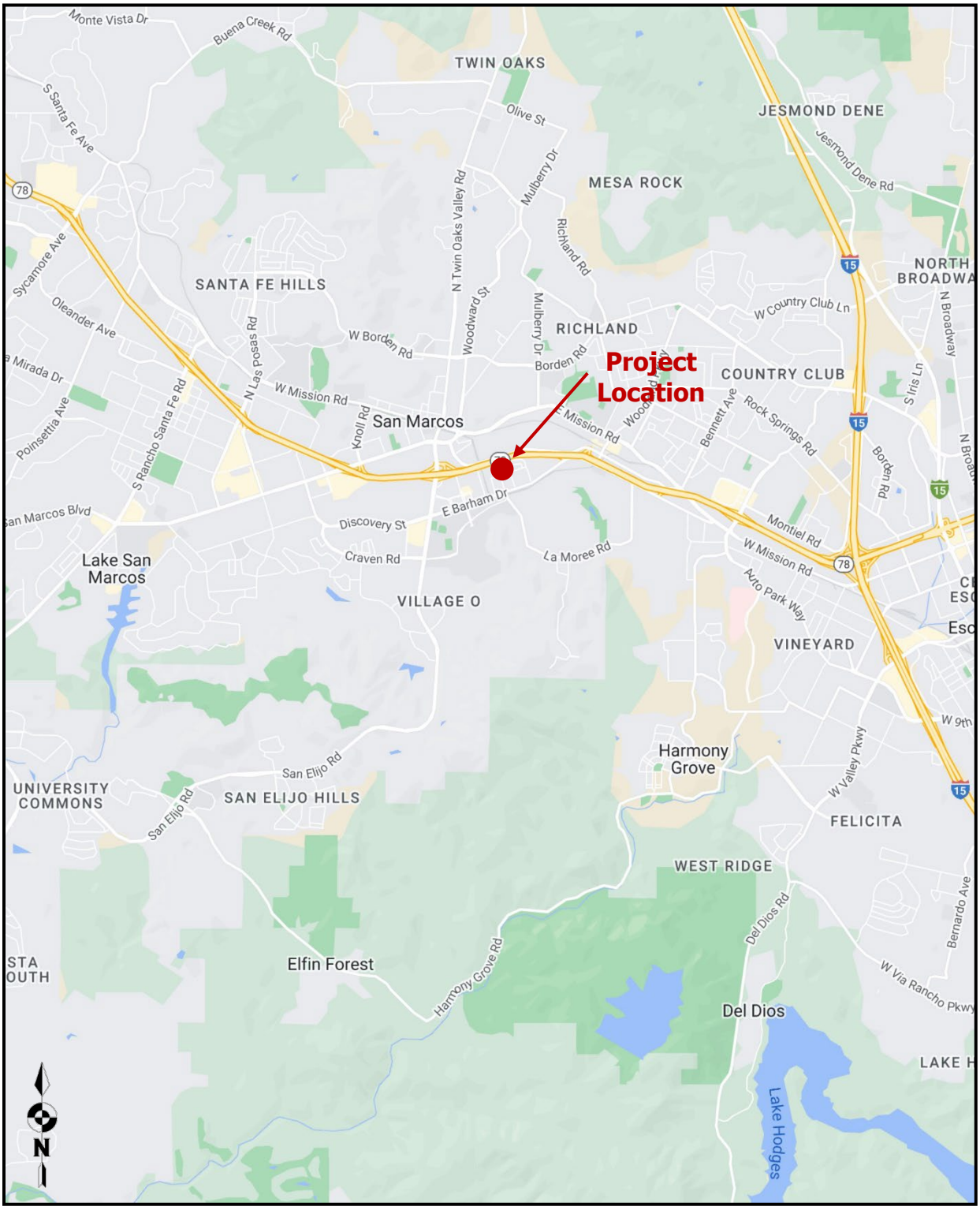
This analysis has been completed in order to compare GHG emissions from both the proposed Project and a General Plan Buildout scenario (GPBS) compatible with the UDSP. Under the UDSP, the project site is in the Office/Commercial District designation, and could be constructed with up to 6 stories/90 foot building height of mixed use or freeway commercial use. For the purposes of this analysis, a 200,000 SF multi-story office building with 500 parking spaces would be a reasonable development scenario under the current UDSP designation.

Figure 1-A: CubeSmart Development Details



Source: (VALLI ARCHITECTURAL GROUP, 2024)

Figure 1-B: Project Vicinity Map



Source: (Google, 2025)

2.0 BACKGROUND AND ENVIRONMENTAL SETTING

2.1 Understanding Climate Change and Greenhouse Gases

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (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 the Earth's energy balance, including variations in the sun's energy reaching 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. The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. 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.

Some greenhouse gases are emitted exclusively from human activities (e.g., synthetic halocarbons). Others occur naturally but are found at elevated levels due to human inputs (e.g., carbon dioxide). Anthropogenic sources result from energy-related activities (e.g., combustion of fossil fuels in the electric utility and transportation sectors), agriculture, land-use change, waste management and treatment activities, and various industrial processes. Major greenhouse gases include carbon dioxide, methane, nitrous oxide, and various synthetic chemicals (EPA, 2023).

The GHGs typically analyzed in a greenhouse gas study are Carbon Dioxide (CO_2), Methane (CH_4), and Nitrous Oxide (N_2O) because they are emitted in the greatest quantities from human activities. A brief description of each GHG follows:

Carbon Dioxide (CO_2) is widely reported as the most important anthropogenic greenhouse gas because it currently accounts for the greatest portion of the warming associated with human activities. Carbon dioxide occurs naturally as part of the global carbon cycle, but human activities have increased atmospheric loadings through combustion of fossil fuels and

other emissions sources. Natural sinks that remove carbon dioxide from the atmosphere (e.g., oceans, plants) help regulate carbon dioxide concentrations, but human activities can disturb these processes (e.g., deforestation) or enhance them (EPA, 2023).

Methane comes from many sources, including human activities such as coal mining, natural gas production and distribution, waste decomposition in landfills, and digestive processes in livestock and agriculture. Natural sources of methane include wetlands and termite mounds (EPA, 2023).

Nitrous Oxide is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels (EPA, 2023).

To simplify greenhouse gas calculations, both CH_4 and N_2O are converted to an equivalent amount of carbon dioxide, or CO_2e. CO_2e is calculated by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP). GWPs for both CH_4 and N_2 are presented within the 2007 Intergovernmental Panel on Climate Change (IPCC) report as being 25 and 298, respectively (IPCC, 2007). The IPCC 2007 report was updated in 2021 and now recommends adding a 100-year timeline to the GWP discussions (GWP-100). For CH_4 the GWP is between 27-30 and the GWP for N_2O is 273 (USEPA, 2023). Since CalEEMod is the adopted computer model for calculating GHGs, the earlier GWPs within CalEEMod were utilized.

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heats up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height.

Meteorological trends within the area generally show daytime highs ranging between 64ºF in the winter to approximately 88ºF in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 37ºF in the winter to approximately 59ºF in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2021). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

3.0 CLIMATE CHANGE REGULATORY ENVIRONMENT

3.1 State

State Greenhouse Gas Targets

Executive Order S-3-05

EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050.

AB 32 and CARB's Climate Change Scoping Plan

In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020.

Under AB 32, the California Air Resources Board (CARB) is responsible for and is recognized as having the expertise to carry out and develop the programs and regulations necessary to achieve the GHG emissions reduction mandate of AB 32. Therefore, in furtherance of AB 32, CARB adopted regulations requiring the reporting and verification of GHG emissions from specified sources, such as industrial facilities, fuel suppliers and electricity importers (see Health & Safety Code Section 35830; Cal. Code Regs., tit. 17, §§95100 et seq.). CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2E). CARB's adoption of this limit is in accordance with Health and Safety Code Section 38550.

Further, in 2008, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*2008 Scoping Plan*) in accordance with Health and Safety Code Section 38561. The *2008 Scoping Plan* established an overall framework for the measures to be implemented to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The *2008 Scoping Plan* evaluated opportunities for sector-specific reductions,

integrated all CARB and Climate Action Team[1] early actions and additional GHG reduction features by both entities, identified additional measures to be pursued as regulations, and outlined the role of a cap-and-trade program.

In the *2008 Scoping Plan*, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]). For purposes of calculating this percent reduction, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the *2008 Scoping Plan's* Functional Equivalent Document, CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (12 percent to 20 percent), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

In 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*). The stated purpose of the *First Update* was to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." The *First Update* found that California was on track to meet the 2020 emissions reduction mandate established by AB 32, noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim goal of reducing

[1] The Climate Action Team is comprised of state agency secretaries and heads of state agencies, boards and departments; these members work to coordinate statewide efforts to implement GHG emissions reduction programs and adaptation programs.

statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050 as set forth in S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's *Scoping Plan* to express the 2030 target in terms of MMT CO_2e. The EO also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set a new statewide GHG reduction target; make changes to CARB's membership and increase legislative oversight of CARB's climate change-based activities; and expand dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, 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 percent 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, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members. The legislation further 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 identify specific information for GHG emissions reduction measures when updating the scoping plan, including information regarding the range of projected GHG emissions and air pollution reductions that result from each measure and the cost-effectiveness (including avoided social costs) of each measure (see Health & Safety Code Section 38562.7).

2017 and 2022 Scoping Plan

In November 2017, CARB released *California's 2017 Climate Change Scoping Plan* for public review and comment (CARB, 2017). This update includes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The strategy includes continuing the Cap-and-Trade Program through 2030,[2] inclusive policies and broad support for clean technologies, enhanced industrial efficiency and competitiveness, prioritization of transportation sustainability, continued leadership on clean energy, putting

[2] In July 2017, AB 398 was enacted into law, thereby extending the legislatively-authorized lifetime of the Cap-and-Trade Program to December 31, 2030.

waste resources to beneficial use, supporting resilient agricultural and rural economics and natural and working lands, securing California's water supplies, and cleaning the air and public health. When discussing project-level GHG emissions reduction actions and thresholds, the *2017 Scoping Plan* states "[a]chieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." However, the *2017 Scoping Plan* also recognizes that such an achievement "may not be feasible or appropriate for every project … and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA." CARB's Governing Board adopted the *2017 Scoping Plan* in December 2017.

In 2022 California released the latest scoping plan update which lays out the sector-by-sector roadmap for California to achieve carbon neutrality by 2045. This plan, addressing recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045 (CARB, 2022). The plan suggests that bold steps are required by the State and calls for the need of vast research and development with respect to methods of capturing CO2. The plan calls for a need to take an unprecedented transformation and aggressively seek reductions to reduce the need of fossil fuels by moving to zero emission transportation, electrifying the cars, buses, trucks and trains. The plan relays on external controls and requires partnership and collaboration with the federal government, other U.S. states, and other jurisdictions around the world for California to succeed in achieving its climate targets.

Assembly Bill 1279

In 2022, the Governor approved Assembly Bill 1279 (AB 1279) (State of California, 2022) which requires the state board to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions and to update the scoping plan at least once every 5 years. This bill, the California Climate Crisis Act, would declare the policy of the state both to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85 percent below the 1990 levels.

<u>California Building Standards</u>

Title 24, Part 6

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce

GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new buildings and alterations or additions to existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy efficient technologies and construction methods. 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 current code requirement is based on the 2022 standards, as those standards went into effect on January 1, 2023. The 2022 standards have mandatory requirements to reduce building envelope air leakage, improve roofing through Solar Reflectance and Thermal Emittance, improve on insulation, improve on space conditioning, water heating and plumbing, improve on lighting efficiency requirements to name a few. The project will be required to implement Title 24 2022.

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 CALGreen and establishes minimum mandatory standards as well as 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. The CALGreen standards initially 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 CALGreen 2016 standards became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Sixty-five (65) percent of construction and demolition waste must be diverted from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Inclusion of EV charging stations or designated spaces capable of supporting future charging stations.

- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements; stricter water conservation, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 75 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

The newest CALGreen Standards were updated in 2022 and became effective on January 1, 2023. The updated Code includes modifications to current codes and will be a requirement to the Project. Mandatory requirements include many updated Electric Vehicle Charging requirements for multi and single family developments (California Title 24, Part 11, 2022).

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with 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 for 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.

Mobile Sources

AB 1493

In response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 was enacted in July 2002. 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. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30 percent (CARB, 2017).

EO S-1-07

Issued in January 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009 and began implementation in 2011. The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector.

The latest amendment to LCFS implementation regulations was in 2018 and CARB approved amendments which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32 (CARB, 2018).

SB 375

SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional metropolitan planning organizations (MPOs) are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan. The goal of the SCS is to establish a forecasted development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible and if implemented, the GHG reduction targets. If a SCS is unable to achieve the GHG reduction target, an 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.

Pursuant to Government Code Section 65080(b)(2)(K), a SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a cities or counties land use policies and regulations, including those in a general plan, be consistent with it. 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.

In 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for SANDAG adopted in 2010 are a 7 percent reduction in emissions per capita by 2020 and a 13 percent reduction by 2035; the targets are expressed as a percent change in per capita passenger vehicle GHG emissions relative to 2005.

In October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. In December 2015, CARB, by resolution, accepted SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emissions reduction targets for the region. More specifically, as set forth in CARB Executive Order G-15-075, CARB determined that SANDAG's SCS would achieve a 15 percent per capita reduction by 2020 and a 21 percent per capita reduction by 2035.

In 2018, CARB updated the SB 375 targets. For purposes of SANDAG, the updated targets include a 15 percent reduction in emissions per capita by 2020 and a 19 percent reduction by 2035 (CARB, 2018). SANDAG is in the process of preparing its next SCS, which will consider whether and how the region could attain these reduction targets.

SANDAG approved the 2021 Regional Plan in December 2021. The Plan provides a big picture vision for how the San Diego region will grow through 2050 and beyond with an implementation program to help make the plan a reality. Within the Draft Plan, SANDAG introduced a transformative vision for transportation in San Diego County that completely reimagines how people and goods could move throughout the region in the 21st century. The plan outlines the "5 Big Moves" which are: Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and the Next OS. This plan is the region's long-term plan which will be implemented incrementally through the Regional Transportation Improvement Program (RTIP) (SANDAG, 2021).

In September 2022, the SANDAG Board directed staff to prepare an amendment to the 2021 Regional Plan without the regional road usage charge. In developing the amendment,

SANDAG will refine the financial strategies used in the 2021 Regional Plan to achieve the region's greenhouse gas emissions target set by CARB, without the road usage charge. SANDAG will also assess the region's continued ability to meet air quality standards. An Amendment to the 2021 Regional Plan removing the regional road user charge was adopted by SANDAG in October 2023. The 2025 Regional Plan is currently in development and also will not include a regional road user charge.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, a new 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. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB, 2017). To improve air quality, CARB also has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that, in 2025, cars will emit 75 percent less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, also has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025 (California Air Resources Board, 2012).

This program was recently updated and is known as the Advanced Clean Cars II (ACC II) Program which continues the concept of increasing stringency for fuel-efficiency standards and increasing the number of zero emission vehicles (ZEVs) (CARB, 2023). The regulations are two-pronged. First, it amends the Zero-emission Vehicle (ZEV) Regulation to require an increasing number of ZEVs, and relies on currently available advanced vehicle technologies, including battery-electric, hydrogen fuel cell electric and plug-in hybrid electric-vehicles, to meet air quality and climate change emissions standards. These amendments support Governor Newsom's 2020 Executive Order N-79-20 that requires all new passenger vehicles sold in California to be zero emissions by 2035. Second, the Low-emission Vehicle Regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions.

In October 2023, staff launched a new effort to consider potential amendments to the Advanced Clean Cars II regulations, including updates to the tailpipe greenhouse gas emission standard and limited revisions to the Low-emission Vehicle and ZEV regulations.

EO N-79-20, Zero Emission by 2035, calls for elimination of new internal combustion passenger vehicles by 2035 (CARB, 2023). By setting a course to end sales of internal combustion passenger vehicles by 2035, the Governor's Executive Order establishes a target

for the transportation sector that helps put the state on a path to carbon neutrality by 2045. It is important to note that the Executive Order focuses on new vehicle sales for automakers, and therefore does not require Californians to give up the existing cars and trucks they already own. The primary mechanism for achieving the ZEV target for passenger cars and light trucks is the Advanced Clean Cars (ACC) II Program.

As part of the Executive Order, the Governor's Office of Business and Economic Development (GO-Biz) was tasked with preparing a ZEV Market Development Strategy along with the accompanying California State agency ZEV Action Plans.

In addition to ACC II, the Clean Miles Standard regulation will also help enable the goal of 100% ZEV sales in 2035 by creating demand for ZEVs. This regulation will have aggressive requirements for electric miles that will transition ride-hailing fleets to zero-emission operations starting in 2023 and ramping up through 2030. This regulation was approved by the CARB Board in 2021.

EO B-16-12

EO B-16-12 (March 2012) directs state entities under the Governor's direction and control to support and facilitate development and distribution of ZEVs. This EO also sets a long-term target of reaching 1.5 million zero-emission vehicles on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on Zero-Emission Vehicles that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

SB 350

In 2015, SB 350 – the Clean Energy and Pollution Reduction Act – was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12).

<u>Renewable Energy Procurement</u>

SB 1078

SB 1078 (2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010.

SB X1 2

SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local, publicly owned electric utilities to the RPS.

SB 350

SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030 be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency.

SB 100

SB 100 (2018) has further accelerated and expanded the RPS, requiring achievement of a 50 percent RPS by December 31, 2026 and a 60 percent RPS by December 31, 2030. SB 100 also established a new statewide policy goal that calls for eligible renewable energy resources and zero-carbon resources to supply 100 percent of electricity retail sales within the State of California by December 31, 2045.

SB 1020

In 2022, the Governor approved SB 1020 (State of California, 2022). This bill requires the state board to conduct a series of public workshops to give interested parties an opportunity to comment on the plan and requires a portion of those workshops to be conducted in regions of the state that have the most significant exposure to pollutants. This bill includes as regions for these workshops federal extreme nonattainment areas that have communities with minority populations, communities with low-income populations, or both.

Under existing law, it was the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use

customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

This bill revised the state policy to instead provide that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035, 95 percent of all retail sales of electricity to California end-use customers by December 31, 2040, 100 percent of all retail sales of electricity to California end-use customers by December 31, 2045, and 100 percent of electricity procured to serve all state agencies by December 31, 2035, as specified.

Water

EO B-29-15

In response to drought-related concerns, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since 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 has 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.

Solid Waste

AB 939 and AB 341

AB 939 (1989), known as the Integrated Waste Management Act (Public Resources Code Sections 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, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 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 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources

Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by 1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials and 2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle, 2020) Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (CO_2 and CH_4) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

AB 1826 (2014)

In October 2014 Governor Brown signed AB 1826 which requires businesses to recycle their organic waste as of April 1, 2016. The law also required that after January 1, 2016, local jurisdictions across the state were required to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. This requires business generating over 8 cubic yards (CY) of waste per week to arrange organic waste recycling services. The law also contained a trigger that allowed for increased implementation. For example, in 2019 CalRecycle changed the 8 CY threshold to 4 CY and then in 2020 to CY for business to implement organic recycling programs (CalRecycle, 2023).

Senate Bill 1383

Short-Lived Climate Pollutants: Organic (2016) is a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) (CalRecycle, 2016). Specifically, the law sets the following targets: 1) Reduce statewide disposal of organic waste by 50% by January 1, 2020 and by 75% by January 1, 2025 (based on 2014 levels), and 2) rescue at least 20% of currently disposed of edible food for human consumption by 2025.

3.2 GHG Thresholds of Significance

The City of San Marcos (City) adopted an updated Climate Action Plan (CAP) on December 8, 2020. The CAP outlines strategies and measures that the City will undertake to achieve its proportional share of State GHG emissions reduction targets. The CAP is a plan for the reduction of GHG emissions in accordance with (CEQA Guidelines Section 15183.5. 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 is consistent with the City's CAP. The CAP set the following citywide targets (City of San Marcos, 2020).

- 4 percent below 2012 levels (575,000 MT CO_2e) by 2020
- 42 percent below 2012 levels (347,000 MT CO_2e) by 2030

The City has also developed a Climate Action Plan Consistency Review Checklist (CAP Consistency Checklist), in conjunction with the CAP, to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. The CAP Consistency Guidance Memo dated July 15, 2020 summarizes the methodology and application of a GHG screening threshold which is set at 500 metric tons carbon dioxide equivalent [MT CO_2e] per year as outlined in the CAP (Ascent, 2020). Projects that are projected to emit fewer than 500 MT CO_2e annually would not make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. It should be noted that this screening threshold is for new development projects consistent with the City's General Plan. When such a project exceeds the screening threshold, the project would be required to demonstrate consistency with the CAP through the CAP Consistency Checklist.

In most cases, compliance with the CAP Consistency Checklist would provide the CEQA streamlining path to allow project specific environmental documents, if eligible, to tier from and/or incorporate by reference the CAP's programmatic review of GHG impacts. Projects that are consistent with the General Plan and implement CAP GHG reduction measures may incorporate by reference the CAP's cumulative GHG analysis. The City's CAP meets the requirements under Section 15183.5 of the CEQA Guidelines as a qualified plan for the reduction of GHG emissions for use in cumulative impact analysis pertaining to development projects. The CAP Consistency Checklist provides a streamlined review process for the GHG emissions analysis of proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA.

If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the CAP Consistency Checklist.

In addition, some projects may seek a General Plan amendment. For these projects, the CAP Consistency Checklist requires a determination on whether the amendment would result in an equivalent or less GHG-intensive project when compared to the existing land use designations. In addition to providing evidence to support the conclusion that the project would generate

fewer emissions than existing land use designations, these projects would demonstrate consistency with the CAP through completion of Step 2 of the CAP Consistency Checklist.

If a land use designation amendment results in a more GHG-intensive project, the project is required to prepare a quantitative GHG analysis based on applicable sections of the CEQA Guidelines.

4.0 METHODOLOGY

4.1 General Plan Land Use of the Site

The CubeSmart project does not seek a GPA or rezone. An amendment to the UDSP is proposed to create a self-storage overaly zone to allow for the development of the project. In addition, per conversations with the project Architect, this site could reasonably also support a multi-story 200,000 SF office space with 500 parking locations. This scenario is referred to as the General Plan Buildout Scenario (GPBS) as described above.

4.2 Construction CO_2e Emissions Calculation Methodology

GHGs related to construction and daily operations were calculated using the latest CalEEMod 2022.1 GHG model. The purpose of this analysis is to show compliance with CEQA through analysis using the City's CAP. This analysis focuses on the relative comparison between what is Proposed and the GPBS consisting of a 200,000 SF office building with 500 parking locations. The construction module in CalEEMod was used to calculate the emissions associated with the construction for both scenarios. The CalEEMod input/output model is shown in ***Attachment A*** for the Proposed Project and ***Attachment B*** for the GPBS.

The project was estimated to start grading sometime in 2025 and be completed in roughly one year. Table 4.1 below describes the construction equipment and durations for the Proposed Project and would be slightly shorter than the GPBS CalEEMod defaults were utilized for construction for both scenarios. Please see ***Attachment B*** to see the estimated construction durations and equipment for the GPBS.

Table 4.1: Expected Construction Equipment (Cube Smart Self Storage)

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	6/30/2025	7/4/2025	
Graders			1
Scrapers			1
Tractors/Loaders/Backhoes			1
Grading	7/5/2025	7/13/2025	
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Building Construction	7/14/2025	5/18/2026	
Cranes			1
Forklifts			2

Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			3
Paving	5/19/2026	6/2/2026	
Cement and Mortar Mixers			1
Pavers			1
Paving Equipment			1
Rollers			2
Tractors/Loaders/Backhoes			1
Architectural Coating	6/3/2026	6/30/2026	
Air Compressors			1
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.			

4.3 Operational Emissions Calculation Methodology

Once construction is complete, the proposed project would generate GHG emissions from daily operations which would include sources such as energy usage from electricity and natural gas, mobile sources from vehicular traffic, municipal waste, water uses, and area sources such as emissions generated from onsite landscaping. Emissions resulting from all of these sources are calculated within CalEEMod.

CalEEMod utilizes 2019 Title 24 building standard efficiencies as defaults, though the project will need to comply with the latest Title 24 standards in effect at the time building permits are issued. Since the current 2022 Title 24 building standards increase efficiencies, this analysis based on 2019 building standards is conservative.

Solid municipal waste generated in the form of trash is also considered within this analysis as the decomposition of organic material breaks down to form GHGs. GHGs from water are also indirectly generated through the conveyance of the resource via pumping throughout the state and as necessary for wastewater treatment.

Again, two models were created for this analysis which are both used to compare project intensities as it relates to GHGs. The comparison is based on construction starting at the same time and operations starting and completing at essentially the same time as well. Default settings were utilized for the operations of both scenarios as well. The operational modeling results for the proposed development and the GPBS are also shown in ***Attachments A*** and ***-B*** respectively.

5.0 FINDINGS

5.1 Proposed Construction Emissions

Utilizing the CALEEMOD 2022.1 construction inputs as shown in Table 5.1, we find that construction of the project will produce approximately 330 MT of CO_2e over the construction life of the project. Given the fact that the total emissions would ultimately contribute to cumulative levels, construction emissions of GHGs were annualized to allow for inclusion in operational emissions estimates, consistent with the South Coast Air Quality Management District (SCAQMD) recommendations for construction GHG emissions (SCAQMD, 2008). Construction emissions were annualized over a 30-year period, per SCAQMD recommendations, to account for emissions generated over the assumed project lifetime. Given this, the Project would add approximately 11 MT CO_2e per year from construction which were added to annual operational emissions estimates as can be seen in Table 5.1. The proposed construction from the GPBS would be 19.3 MT CO_2e per year as shown in Table 5.2 below.

Table 5.1: Cube Smart - Construction CO_2e Emissions Summary (MT CO_2e/year)

Year	Total CO_2	CH_4	N_2O	CO_2e
2025	181	0.01	0.01	183
2026	145	0.01	< 0.005	147
Total Cumulative Construction Emissions (MT CO2e)				**330**
Yearly Average Construction Emissions (MT CO2e /year over 30 years)				**11**

Table 5.2: GPBS - Construction CO_2e Emissions Summary (MT CO_2e/year)

Year	Total CO_2	CH_4	N_2O	CO_2e
2025	292	0.01	0.02	298
2026	277	0.01	0.02	282
Total Cumulative Construction Emissions (MT CO2e)				**580**
Yearly Average Construction Emissions (MT CO2e /year over 30 years)				**19.3**

5.2 Proposed Operational Emissions

Once construction is completed the proposed project would generate GHG emissions from daily operations which would include sources such as area, energy, mobile, solid waste and water uses, which are calculated within CalEEMod.

As noted above, this analysis strategy modeled both the Project and a GPBS both consistent with the UDSP. The operational emissions from both scenarios are provided in Table 5.3 and Table 5.4 below:

Table 5.3: Cube Smart – Total CO_2e Emissions Summary (MT CO_2e/year)

Source	Total CO_2	CH_4	N_2O	CO_2e (MT/Yr)
Mobile	222	0.01	0.01	225
Area	1.62	< 0.005	< 0.005	1.63
Energy	96.5	0.01	< 0.005	97.2
Water	11.9	0.84	0.02	38.9
Waste	9.33	0.93	0	32.6
Operations Total				**395.3**
Construction Emissions (See Table 5.1 above)				**11.0**
Construction and Operations (MT CO_2e / Year)				**406.33**

Data is presented in decimal format and may have rounding errors.
* No Data Provided

Table 5.4: GPBS - Total CO_2e Emissions Summary (MT CO_2e/year)

Source	Total CO_2	CH_4	N_2O	CO_2e (MT/Yr)
Mobile	1692	0.09	0.07	1718
Area	5.84	< 0.005	< 0.005	5.86
Energy	423	0.09	0.01	427
Water	11.8	0.84	0.02	38.8
Waste	16.6	1.66	0	58.1
Operations Total				**2,247.76**
Construction Emissions (See Table 5.2 above)				**19.3**
Construction and Operations				**2,267.06**

Data is presented in decimal format and may have rounding errors.
* No Data Provided

Table 5.3 indicates that the Project operations and construction would generate 406.33 MT CO_2e per year. Table 5.4 indicates that the GPBS would generate 2,267.06 MT CO_2e. Based on this analysis, the proposed Project would be less intense than the GPBS as it relates to the CAP. Normally the comparison approach is utilized when projects seek a GPA or an amendment that would normally seek a modification to any approved or adopted plans.

The proposed Project would also generate fewer than 500 MT per year when both construction and operational emissions are combined. The Project would generate 406.33 MT CO_2e per year. Per the CAP this project would not make a considerable contribution to the cumulative impact of climate change and would not need to provide additional analysis to demonstrate consistency with the CAP. Given this, the Project would have a less than significant GHG impact under CEQA. No mitigation measures would be required.

It should be noted that the Project has intentions to reduce energy demand to cut future operational costs through the installation of a rooftop photovoltaic (PV) solar panel system. Since PV systems generate fully renewable energy, any electrical energy generated would similarly reduce or offset demand from non-renewable energy sources which would be expected from electrical grid operators. This in turn would reduce cumulative GHG emissions. No GHG reductions were included in this analysis as it relates to the solar proposed and solar generation is not a required mitigation measure for this project.

5.3 CEQA Compliance

SB 97 directed amendments to the CEQA statute to specifically establish that GHG emissions and their impacts are appropriate subjects for CEQA analysis. Under SB 97 the project should be able to answer the following questions for CEQA compliance.

1. Will the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The City is committed to reducing its GHG emissions consistent with SB 32. Based on this requirement, the City's CAP concludes that proposed General Plan amendments would be consistent with the CAP so long as the GHG emission generated by the amendment are less than would otherwise be produced by a consistent General Plan buildout scenario.

The proposed project was found to emit 406.33 MT CO_2e per year and the GPBS was estimated to generate at least 2,267.06 MT CO_2e per year. The Project would therefore have a less intense carbon footprint when compared to what could otherwise be assumed as allowed under the UDSP. Given this the Project as proposed would be less than significant in terms of GHG intensity. In addition, it should be noted, the project would generate fewer than

500 MT CO_2e per year which is the screening threshold for Projects deemed to generate a less than significant GHG impact cumulatively under the CAP with no additional requirements to further reduce GHG emissions. Therefore, the Project would have a less than significant impact on the environment.

2. Will the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project was found to emit 406.33 MT CO_2e per year and the GPBS was estimated to generate at least 2,267.06 MT CO_2e per year. The Project would therefore have a less intense carbon footprint when compared to what could otherwise be assumed as allowed under the UDSP. Given this, the Project would have a lower GHG intensity than the BPBS. In addition, the project would generate fewer than 500 MT CO_2e per year which is the screening threshold for Projects deemed to generate a less than significant GHG impact cumulatively under the CAP with no additional requirements to further reduce GHG emissions. Based on this, a less than significant impact would be expected by the project since the Project is consistent with the City's CAP.

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ATTACHMENT A

CalEEMod Emission Model – Proposed Project

CubeSmart Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CubeSmart
Construction Start Date	6/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	9.80
Location	E Carmel St, San Marcos, CA, USA
County	San Diego
City	San Marcos
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6292
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
Unrefrigerated Warehouse-No Rail	111	1000sqft	2.55	111,200	5,000	—	—	—

Parking Lot	12.0	Space	0.11	0.00	5,000	—	—	—

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.	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	—	3,101	3,101	0.13	0.10	3,136
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	—	3,076	3,076	0.13	0.10	3,109
Average Daily (Max)	—	—	—	—	—	—
Unmit.	—	1,095	1,095	0.05	0.03	1,107
Annual (Max)	—	—	—	—	—	—
Unmit.	—	181	181	0.01	0.01	183

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—
2025	—	3,101	3,101	0.13	0.10	3,136
2026	—	3,083	3,083	0.13	0.10	3,118
Daily - Winter (Max)	—	—	—	—	—	—
2025	—	3,076	3,076	0.13	0.10	3,109
2026	—	3,059	3,059	0.13	0.10	3,092

Average Daily	—	—	—	—	—	—
2025	—	1,095	1,095	0.05	0.03	1,107
2026	—	877	877	0.04	0.03	886
Annual	—	—	—	—	—	—
2025	—	181	181	0.01	0.01	183
2026	—	145	145	0.01	< 0.005	147

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.	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	106	2,019	2,125	10.9	0.18	2,455
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	106	1,937	2,043	10.9	0.18	2,370
Average Daily (Max)	—	—	—	—	—	—
Unmit.	106	1,957	2,062	10.9	0.18	2,390
Annual (Max)	—	—	—	—	—	—
Unmit.	17.5	324	341	1.80	0.03	396

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Mobile	—	1,394	1,394	0.06	0.05	1,416
Area	—	19.9	19.9	< 0.005	< 0.005	20.0
Energy	—	583	583	0.09	0.01	587
Water	49.3	22.3	71.6	5.07	0.12	235
Waste	56.3	0.00	56.3	5.63	0.00	197

Total	106	2,019	2,125	10.9	0.18	2,455
Daily, Winter (Max)	—	—	—	—	—	—
Mobile	—	1,332	1,332	0.07	0.06	1,350
Area	—	—	—	—	—	—
Energy	—	583	583	0.09	0.01	587
Water	49.3	22.3	71.6	5.07	0.12	235
Waste	56.3	0.00	56.3	5.63	0.00	197
Total	106	1,937	2,043	10.9	0.18	2,370
Average Daily	—	—	—	—	—	—
Mobile	—	1,341	1,341	0.07	0.06	1,362
Area	—	9.81	9.81	< 0.005	< 0.005	9.84
Energy	—	583	583	0.09	0.01	587
Water	49.3	22.3	71.6	5.07	0.12	235
Waste	56.3	0.00	56.3	5.63	0.00	197
Total	106	1,957	2,062	10.9	0.18	2,390
Annual	—	—	—	—	—	—
Mobile	—	222	222	0.01	0.01	225
Area	—	1.62	1.62	< 0.005	< 0.005	1.63
Energy	—	96.5	96.5	0.01	< 0.005	97.2
Water	8.16	3.70	11.9	0.84	0.02	38.9
Waste	9.33	0.00	9.33	0.93	0.00	32.6
Total	17.5	324	341	1.80	0.03	396

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,717	2,717	0.11	0.02	2,726
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	22.3	22.3	< 0.005	< 0.005	22.4
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	3.70	3.70	< 0.005	< 0.005	3.71
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	71.2	71.2	< 0.005	< 0.005	72.2
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	0.56	0.56	< 0.005	< 0.005	0.57
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	0.09	0.09	< 0.005	< 0.005	0.09

Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,455	2,455	0.10	0.02	2,463
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	40.4	40.4	< 0.005	< 0.005	40.5
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	6.68	6.68	< 0.005	< 0.005	6.70
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	94.9	94.9	< 0.005	< 0.005	96.3
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—
Worker	—	1.49	1.49	< 0.005	< 0.005	1.51
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	0.25	0.25	< 0.005	< 0.005	0.25
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,209
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,209
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	737	737	0.03	0.01	739
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	122	122	< 0.005	< 0.005	122
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	443	443	0.02	0.02	450

Vendor	—	456	456	0.02	0.06	477
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	—	418	418	0.02	0.02	424
Vendor	—	456	456	0.02	0.06	476
Hauling	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	—	141	141	0.01	0.01	143
Vendor	—	153	153	0.01	0.02	159
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	23.4	23.4	< 0.005	< 0.005	23.7
Vendor	—	25.3	25.3	< 0.005	< 0.005	26.4
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,208
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,208
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	594	594	0.02	< 0.005	596
Onsite truck	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—
Off-Road Equipment	—	98.4	98.4	< 0.005	< 0.005	98.7
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	434	434	0.02	0.02	441
Vendor	—	448	448	0.02	0.06	468
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	—	410	410	0.02	0.02	415
Vendor	—	448	448	0.02	0.06	468
Hauling	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	—	112	112	0.01	< 0.005	113
Vendor	—	121	121	< 0.005	0.02	126
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	18.5	18.5	< 0.005	< 0.005	18.8
Vendor	—	20.0	20.0	< 0.005	< 0.005	20.9
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	1,244	1,244	0.05	0.01	1,248
Paving	—	—	—	—	—	—

Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	34.1	34.1	< 0.005	< 0.005	34.2
Paving	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	5.64	5.64	< 0.005	< 0.005	5.66
Paving	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	139	139	0.01	< 0.005	142
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	3.64	3.64	< 0.005	< 0.005	3.69
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	0.60	0.60	< 0.005	< 0.005	0.61
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2026) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	134
Architectural Coatings	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	7.32	7.32	< 0.005	< 0.005	7.34
Architectural Coatings	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	1.21	1.21	< 0.005	< 0.005	1.22
Architectural Coatings	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	86.8	86.8	< 0.005	< 0.005	88.1
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	4.53	4.53	< 0.005	< 0.005	4.60
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	0.75	0.75	< 0.005	< 0.005	0.76
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	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

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

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	1,394	1,394	0.06	0.05	1,416
Parking Lot	—	0.00	0.00	0.00	0.00	0.00
Total	—	1,394	1,394	0.06	0.05	1,416
Daily, Winter (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	1,332	1,332	0.07	0.06	1,350
Parking Lot	—	0.00	0.00	0.00	0.00	0.00
Total	—	1,332	1,332	0.07	0.06	1,350
Annual	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	222	222	0.01	0.01	225
Parking Lot	—	0.00	0.00	0.00	0.00	0.00
Total	—	222	222	0.01	0.01	225

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	59.9	59.9	0.04	0.01	62.6
Parking Lot	—	0.51	0.51	< 0.005	< 0.005	0.53
Total	—	60.4	60.4	0.04	0.01	63.1
Daily, Winter (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	59.9	59.9	0.04	0.01	62.6
Parking Lot	—	0.51	0.51	< 0.005	< 0.005	0.53
Total	—	60.4	60.4	0.04	0.01	63.1
Annual	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	9.92	9.92	0.01	< 0.005	10.4
Parking Lot	—	0.08	0.08	< 0.005	< 0.005	0.09
Total	—	10.0	10.0	0.01	< 0.005	10.4

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	523	523	0.05	< 0.005	524
Parking Lot	—	0.00	0.00	0.00	0.00	0.00
Total	—	523	523	0.05	< 0.005	524
Daily, Winter (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	523	523	0.05	< 0.005	524
Parking Lot	—	0.00	0.00	0.00	0.00	0.00
Total	—	523	523	0.05	< 0.005	524
Annual	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	86.5	86.5	0.01	< 0.005	86.8
Parking Lot	—	0.00	0.00	0.00	0.00	0.00
Total	—	86.5	86.5	0.01	< 0.005	86.8

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Consumer Products	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—
Landscape Equipment	—	19.9	19.9	< 0.005	< 0.005	20.0
Total	—	19.9	19.9	< 0.005	< 0.005	20.0
Daily, Winter (Max)	—	—	—	—	—	—
Consumer Products	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Consumer Products	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—
Landscape Equipment	—	1.62	1.62	< 0.005	< 0.005	1.63
Total	—	1.62	1.62	< 0.005	< 0.005	1.63

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	49.3	22.3	71.6	5.07	0.12	235
Parking Lot	0.00	0.05	0.05	< 0.005	< 0.005	0.05
Total	49.3	22.3	71.6	5.07	0.12	235
Daily, Winter (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	49.3	22.3	71.6	5.07	0.12	235
Parking Lot	0.00	0.05	0.05	< 0.005	< 0.005	0.05
Total	49.3	22.3	71.6	5.07	0.12	235
Annual	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	8.16	3.69	11.8	0.84	0.02	38.8
Parking Lot	0.00	0.01	0.01	< 0.005	< 0.005	0.01
Total	8.16	3.70	11.9	0.84	0.02	38.9

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	56.3	0.00	56.3	5.63	0.00	197
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00
Total	56.3	0.00	56.3	5.63	0.00	197
Daily, Winter (Max)	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	56.3	0.00	56.3	5.63	0.00	197

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00
Total	56.3	0.00	56.3	5.63	0.00	197
Annual	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	9.33	0.00	9.33	0.93	0.00	32.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00
Total	9.33	0.00	9.33	0.93	0.00	32.6

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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
Site Preparation	Site Preparation	6/30/2025	7/4/2025	5.00	3.00	—
Grading	Grading	7/5/2025	7/13/2025	5.00	6.00	—
Building Construction	Building Construction	7/14/2025	5/18/2026	5.00	220	—

Paving	Paving	5/19/2026	6/2/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	6/3/2026	6/30/2026	5.00	20.0	—

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
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	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
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	46.7	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	18.2	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	9.34	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	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	166,800	55,600	282

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	4.50	0.00	—
Grading	—	—	6.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.11

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	0.11	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	589	0.03	< 0.005
2026	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
Unrefrigerated Warehouse-No Rail	193	193	193	70,623	1,685	1,685	1,685	615,155
Parking Lot	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	166,800	55,600	282

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)
Unrefrigerated Warehouse-No Rail	484,827	45.1	0.0330	0.0040	1,630,984
Parking Lot	4,121	45.1	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)
Unrefrigerated Warehouse-No Rail	25,715,000	1,000,000
Parking Lot	0.00	74,721

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	105	—
Parking Lot	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

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	14.7	annual days of extreme heat
Extreme Precipitation	5.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.5	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	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	0	0	0	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	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
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	45.0
AQ-PM	13.0
AQ-DPM	26.6
Drinking Water	42.5
Lead Risk Housing	8.67
Pesticides	45.5
Toxic Releases	15.2
Traffic	47.6
Effect Indicators	—
CleanUp Sites	64.7
Groundwater	64.2
Haz Waste Facilities/Generators	89.2
Impaired Water Bodies	96.3
Solid Waste	66.7
Sensitive Population	—
Asthma	4.85
Cardio-vascular	24.9
Low Birth Weights	51.3
Socioeconomic Factor Indicators	—
Education	15.8
Housing	76.0
Linguistic	24.8
Poverty	42.6
Unemployment	26.9

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	51.4307712
Employed	45.27139741
Median HI	41.7425895
Education	—
Bachelor's or higher	62.78711664
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	68.11240857
Active commuting	53.07327088
Social	—
2-parent households	7.301424355
Voting	59.822918
Neighborhood	—
Alcohol availability	92.87822405
Park access	48.03028359
Retail density	31.46413448
Supermarket access	39.13768767
Tree canopy	56.26844604
Housing	—
Homeownership	52.53432568
Housing habitability	41.44745284
Low-inc homeowner severe housing cost burden	15.62941101
Low-inc renter severe housing cost burden	33.7482356

Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	60.27203901
Arthritis	0.0
Asthma ER Admissions	98.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	69.2
Cognitively Disabled	43.0
Physically Disabled	68.4
Heart Attack ER Admissions	99.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	62.4
SLR Inundation Area	0.0

Children	81.0
Elderly	49.5
English Speaking	57.5
Foreign-born	12.3
Outdoor Workers	84.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	77.2
Traffic Density	67.0
Traffic Access	23.0
Other Indices	—
Hardship	28.4
Other Decision Support	—
2016 Voting	74.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	34.0
Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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: Water and Waste Water	water
Construction: Construction Phases	Estimated Construction

ATTACHMENT B

CalEEMod Emission Model – 200,000 SF Office Building - General Plan Buildout Scenario

CubeSmart 200KSF Office Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CubeSmart 200KSF Office
Construction Start Date	6/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	9.80
Location	E Carmel St, San Marcos, CA, USA
County	San Diego
City	San Marcos
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6292
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
General Office Building	200	1000sqft	1.50	200,000	10,000	—	—	—

Enclosed Parking with Elevator	500	Space	1.50	200,000	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.	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	—	5,246	5,246	0.23	0.30	5,350
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	—	5,169	5,169	0.23	0.30	5,265
Average Daily (Max)	—	—	—	—	—	—
Unmit.	—	1,767	1,767	0.08	0.10	1,799
Annual (Max)	—	—	—	—	—	—
Unmit.	—	292	292	0.01	0.02	298

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—
2025	—	5,246	5,246	0.23	0.30	5,350
2026	—	5,187	5,187	0.22	0.30	5,290
Daily - Winter (Max)	—	—	—	—	—	—
2025	—	5,169	5,169	0.23	0.30	5,265
2026	—	5,112	5,112	0.22	0.30	5,207

Average Daily	—	—	—	—	—	—
2025	—	1,767	1,767	0.08	0.10	1,799
2026	—	1,671	1,671	0.07	0.09	1,703
Annual	—	—	—	—	—	—
2025	—	292	292	0.01	0.02	298
2026	—	277	277	0.01	0.02	282

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.	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	150	16,681	16,830	16.3	0.70	17,495
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	150	15,985	16,135	16.3	0.74	16,764
Average Daily (Max)	—	—	—	—	—	—
Unmit.	150	12,833	12,983	16.2	0.59	13,579
Annual (Max)	—	—	—	—	—	—
Unmit.	24.8	2,125	2,149	2.67	0.10	2,248

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Mobile	—	14,033	14,033	0.65	0.53	14,255
Area	—	71.5	71.5	< 0.005	< 0.005	71.8
Energy	—	2,554	2,554	0.55	0.05	2,582
Water	49.3	22.3	71.6	5.07	0.12	235
Waste	100	0.00	100	10.0	0.00	351

Refrig.	—	—	—	—	—	0.49
Total	150	16,681	16,830	16.3	0.70	17,495
Daily, Winter (Max)	—	—	—	—	—	—
Mobile	—	13,409	13,409	0.69	0.57	13,596
Area	—	—	—	—	—	—
Energy	—	2,554	2,554	0.55	0.05	2,582
Water	49.3	22.3	71.6	5.07	0.12	235
Waste	100	0.00	100	10.0	0.00	351
Refrig.	—	—	—	—	—	0.49
Total	150	15,985	16,135	16.3	0.74	16,764
Average Daily	—	—	—	—	—	—
Mobile	—	10,222	10,222	0.52	0.42	10,376
Area	—	35.3	35.3	< 0.005	< 0.005	35.4
Energy	—	2,554	2,554	0.55	0.05	2,582
Water	49.3	22.3	71.6	5.07	0.12	235
Waste	100	0.00	100	10.0	0.00	351
Refrig.	—	—	—	—	—	0.49
Total	150	12,833	12,983	16.2	0.59	13,579
Annual	—	—	—	—	—	—
Mobile	—	1,692	1,692	0.09	0.07	1,718
Area	—	5.84	5.84	< 0.005	< 0.005	5.86
Energy	—	423	423	0.09	0.01	427
Water	8.16	3.69	11.8	0.84	0.02	38.8
Waste	16.6	0.00	16.6	1.66	0.00	58.1
Refrig.	—	—	—	—	—	0.08
Total	24.8	2,125	2,149	2.67	0.10	2,248

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,717	2,717	0.11	0.02	2,726
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	37.2	37.2	< 0.005	< 0.005	37.3
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	6.16	6.16	< 0.005	< 0.005	6.18
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	71.2	71.2	< 0.005	< 0.005	72.2
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	0.93	0.93	< 0.005	< 0.005	0.94
Vendor	—	0.00	0.00	0.00	0.00	0.00

Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	0.15	0.15	< 0.005	< 0.005	0.16
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,455	2,455	0.10	0.02	2,463
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	53.8	53.8	< 0.005	< 0.005	54.0
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	8.91	8.91	< 0.005	< 0.005	8.94
Dust From Material Movement	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	94.9	94.9	< 0.005	< 0.005	96.3

Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	1.98	1.98	< 0.005	< 0.005	2.01
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	0.33	0.33	< 0.005	< 0.005	0.33
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2025) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,209
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,209
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	711	711	0.03	0.01	713
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	118	118	< 0.005	< 0.005	118
Onsite truck	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	1,404	1,404	0.07	0.05	1,426
Vendor	—	1,641	1,641	0.07	0.23	1,716
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	—	1,326	1,326	0.07	0.05	1,343
Vendor	—	1,642	1,642	0.07	0.23	1,713
Hauling	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	—	432	432	0.02	0.02	438
Vendor	—	530	530	0.02	0.07	553
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	71.5	71.5	< 0.005	< 0.005	72.6
Vendor	—	87.7	87.7	< 0.005	0.01	91.6
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,208
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	—	2,201	2,201	0.09	0.02	2,208
Onsite truck	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	681	681	0.03	0.01	683
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	113	113	< 0.005	< 0.005	113
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	1,376	1,376	0.07	0.05	1,397
Vendor	—	1,610	1,610	0.06	0.23	1,685
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	—	1,299	1,299	0.07	0.05	1,317
Vendor	—	1,611	1,611	0.06	0.23	1,682
Hauling	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	—	405	405	0.02	0.02	411
Vendor	—	498	498	0.02	0.07	520
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	67.1	67.1	< 0.005	< 0.005	68.1
Vendor	—	82.5	82.5	< 0.005	0.01	86.2
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	1,244	1,244	0.05	0.01	1,248
Paving	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	61.3	61.3	< 0.005	< 0.005	61.5
Paving	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	10.2	10.2	< 0.005	< 0.005	10.2
Paving	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	139	139	0.01	< 0.005	142
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	6.55	6.55	< 0.005	< 0.005	6.65
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	—	1.08	1.08	< 0.005	< 0.005	1.10
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2026) - Unmitigated

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

Location	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	134
Architectural Coatings	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	—	6.58	6.58	< 0.005	< 0.005	6.61
Architectural Coatings	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	—	1.09	1.09	< 0.005	< 0.005	1.09
Architectural Coatings	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	—	275	275	0.01	0.01	279
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	—	12.9	12.9	< 0.005	< 0.005	13.1
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—

Worker	—	2.14	2.14	< 0.005	< 0.005	2.17
Vendor	—	0.00	0.00	0.00	0.00	0.00
Hauling	—	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

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

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
General Office Building	—	14,033	14,033	0.65	0.53	14,255
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00
Total	—	14,033	14,033	0.65	0.53	14,255
Daily, Winter (Max)	—	—	—	—	—	—
General Office Building	—	13,409	13,409	0.69	0.57	13,596
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00
Total	—	13,409	13,409	0.69	0.57	13,596
Annual	—	—	—	—	—	—
General Office Building	—	1,692	1,692	0.09	0.07	1,718
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00
Total	—	1,692	1,692	0.09	0.07	1,718

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
General Office Building	—	410	410	0.30	0.04	428
Enclosed Parking with Elevator	—	91.2	91.2	0.07	0.01	95.3
Total	—	501	501	0.37	0.04	524
Daily, Winter (Max)	—	—	—	—	—	—
General Office Building	—	410	410	0.30	0.04	428
Enclosed Parking with Elevator	—	91.2	91.2	0.07	0.01	95.3
Total	—	501	501	0.37	0.04	524
Annual	—	—	—	—	—	—
General Office Building	—	67.9	67.9	0.05	0.01	70.9
Enclosed Parking with Elevator	—	15.1	15.1	0.01	< 0.005	15.8
Total	—	83.0	83.0	0.06	0.01	86.7

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
General Office Building	—	2,053	2,053	0.18	< 0.005	2,058
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00
Total	—	2,053	2,053	0.18	< 0.005	2,058
Daily, Winter (Max)	—	—	—	—	—	—
General Office Building	—	2,053	2,053	0.18	< 0.005	2,058

Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00
Total	—	2,053	2,053	0.18	< 0.005	2,058
Annual	—	—	—	—	—	—
General Office Building	—	340	340	0.03	< 0.005	341
Enclosed Parking with Elevator	—	0.00	0.00	0.00	0.00	0.00
Total	—	340	340	0.03	< 0.005	341

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
Consumer Products	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—
Landscape Equipment	—	71.5	71.5	< 0.005	< 0.005	71.8
Total	—	71.5	71.5	< 0.005	< 0.005	71.8
Daily, Winter (Max)	—	—	—	—	—	—
Consumer Products	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Consumer Products	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—
Landscape Equipment	—	5.84	5.84	< 0.005	< 0.005	5.86
Total	—	5.84	5.84	< 0.005	< 0.005	5.86

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
General Office Building	49.3	22.3	71.6	5.07	0.12	235
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00
Total	49.3	22.3	71.6	5.07	0.12	235
Daily, Winter (Max)	—	—	—	—	—	—
General Office Building	49.3	22.3	71.6	5.07	0.12	235
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00
Total	49.3	22.3	71.6	5.07	0.12	235
Annual	—	—	—	—	—	—
General Office Building	8.16	3.69	11.8	0.84	0.02	38.8
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00
Total	8.16	3.69	11.8	0.84	0.02	38.8

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
General Office Building	100	0.00	100	10.0	0.00	351
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00

Total	100	0.00	100	10.0	0.00	351
Daily, Winter (Max)	—	—	—	—	—	—
General Office Building	100	0.00	100	10.0	0.00	351
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	0.00	100	10.0	0.00	351
Annual	—	—	—	—	—	—
General Office Building	16.6	0.00	16.6	1.66	0.00	58.1
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00
Total	16.6	0.00	16.6	1.66	0.00	58.1

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	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—
General Office Building	—	—	—	—	—	0.49
Total	—	—	—	—	—	0.49
Daily, Winter (Max)	—	—	—	—	—	—
General Office Building	—	—	—	—	—	0.49
Total	—	—	—	—	—	0.49
Annual	—	—	—	—	—	—
General Office Building	—	—	—	—	—	0.08
Total	—	—	—	—	—	0.08

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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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	BCO2	NBCO2	CO2T	CH4	N2O	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
Site Preparation	Site Preparation	6/30/2025	7/7/2025	5.00	5.00	—
Grading	Grading	7/8/2025	7/19/2025	5.00	8.00	—
Building Construction	Building Construction	7/20/2025	6/7/2026	5.00	230	—
Paving	Paving	6/8/2026	7/3/2026	5.00	18.0	—
Architectural Coating	Architectural Coating	7/4/2026	7/29/2026	5.00	18.0	—

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
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	7.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45

Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	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
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	12.0	LDA,LDT1,LDT2
Grading	Vendor	—	7.63	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	148	12.0	LDA,LDT1,LDT2
Building Construction	Vendor	65.6	7.63	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	15.0	12.0	LDA,LDT1,LDT2
Paving	Vendor	—	7.63	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	29.6	12.0	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	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	302,940	100,327	3,920

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50	0.00	—
Grading	—	—	8.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.50

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Enclosed Parking with Elevator	1.50	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	589	0.03	< 0.005
2026	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
General Office Building	1,948	442	140	538,219	16,968	3,850	1,219	4,688,097
Enclosed Parking with Elevator	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	302,940	100,327	3,920

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)
General Office Building	3,318,913	45.1	0.0330	0.0040	6,404,605
Enclosed Parking with Elevator	738,286	45.1	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)
General Office Building	25,715,000	1,000,000
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	186	—
Enclosed Parking with Elevator	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
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General 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	14.7	annual days of extreme heat
Extreme Precipitation	5.15	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.5	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	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	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	1	1	1	2

Wildfire	1	1	1	2
Flooding	1	1	1	2
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	45.0
AQ-PM	13.0
AQ-DPM	26.6
Drinking Water	42.5
Lead Risk Housing	8.67
Pesticides	45.5
Toxic Releases	15.2
Traffic	47.6
Effect Indicators	—
CleanUp Sites	64.7
Groundwater	64.2

Haz Waste Facilities/Generators	89.2
Impaired Water Bodies	96.3
Solid Waste	66.7
Sensitive Population	—
Asthma	4.85
Cardio-vascular	24.9
Low Birth Weights	51.3
Socioeconomic Factor Indicators	—
Education	15.8
Housing	76.0
Linguistic	24.8
Poverty	42.6
Unemployment	26.9

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	51.4307712
Employed	45.27139741
Median HI	41.7425895
Education	—
Bachelor's or higher	62.78711664
High school enrollment	100
Preschool enrollment	58.10342615
Transportation	—
Auto Access	68.11240857
Active commuting	53.07327088

Social	—
2-parent households	7.301424355
Voting	59.822918
Neighborhood	—
Alcohol availability	92.87822405
Park access	48.03028359
Retail density	31.46413448
Supermarket access	39.13768767
Tree canopy	56.26844604
Housing	—
Homeownership	52.53432568
Housing habitability	41.44745284
Low-inc homeowner severe housing cost burden	15.62941101
Low-inc renter severe housing cost burden	33.7482356
Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	60.27203901
Arthritis	0.0
Asthma ER Admissions	98.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	69.2
Cognitively Disabled	43.0
Physically Disabled	68.4

Heart Attack ER Admissions	99.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	62.4
SLR Inundation Area	0.0
Children	81.0
Elderly	49.5
English Speaking	57.5
Foreign-born	12.3
Outdoor Workers	84.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	77.2
Traffic Density	67.0
Traffic Access	23.0
Other Indices	—
Hardship	28.4
Other Decision Support	—
2016 Voting	74.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	34.0
Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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: Water and Waste Water	water
Construction: Construction Phases	Estimated Construction
Land Use	200,000 SF office builiding could be supported onsite 6 stories with 500 parking stalls