Appendix G

Greenhouse Gas Emissions Analysis Memorandum

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MEMORANDUM

To:	Bryan Marsh, CEO, SDCF Monterey Park, LLC
From:	Heidi Rous, CPP, Kimley-Horn and Associates, Inc. Noemi Wyss, AICP, Kimley-Horn and Associates, Inc.
Date:	August 28, 2024
Subject:	1977 Saturn Data Center Project – Greenhouse Gas Emissions Analysis

1.0 Purpose

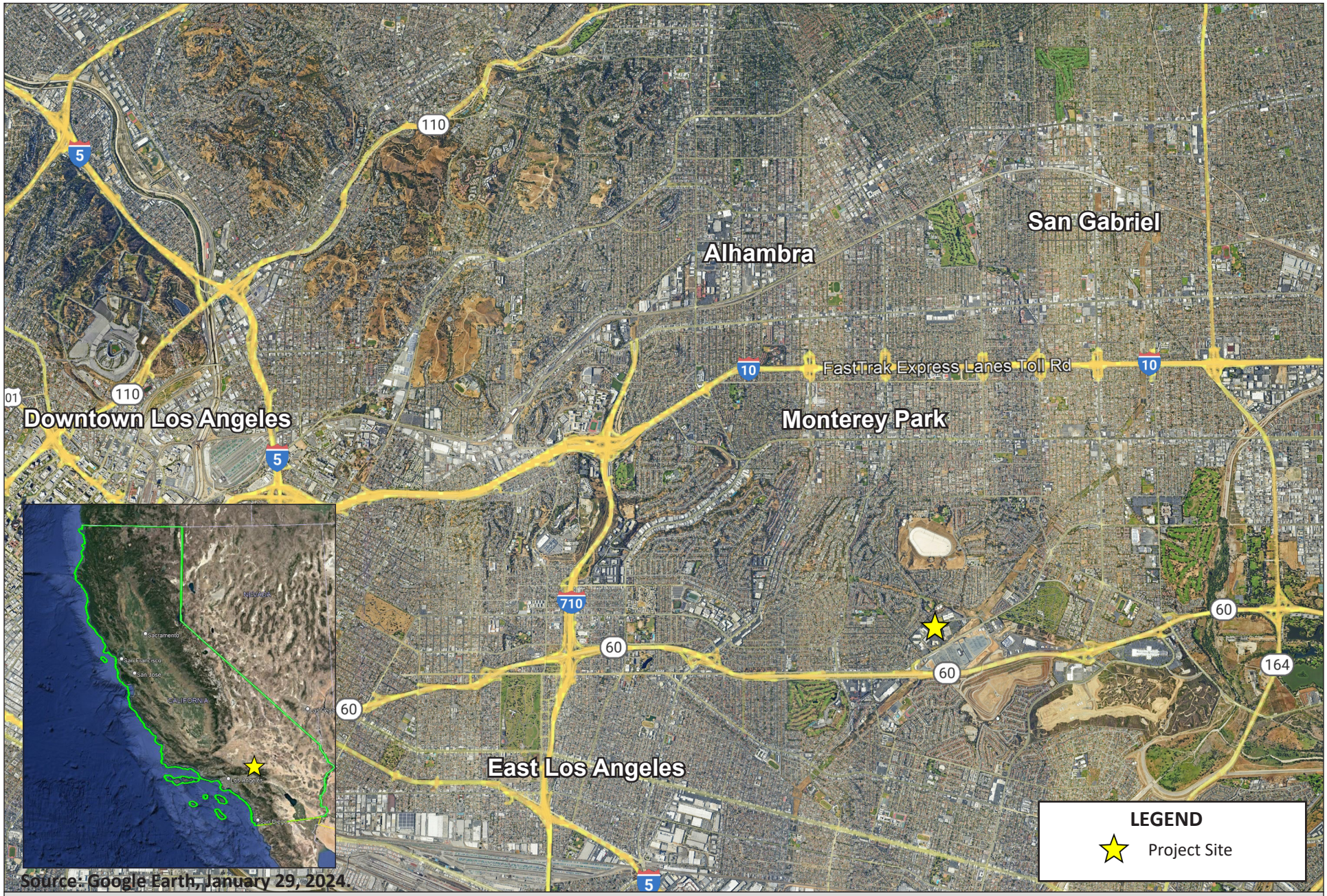
The purpose of this memorandum is to assess potential impacts due to greenhouse gas emissions associated with construction and operation of the 1977 Saturn Data Center Project (Project), proposed to be located in the City of Monterey Park (City), California.

2.0 Proposed Project Description

The Project would be located on an approximately 15.8-acre site (Project Site) at 1977 Saturn Street, see **Figure 1: Regional Vicinity Map**. The Project Site is bound by residences, a park, a commercial nursery, and water towers to the north, open space to the east, office uses to the south, and office uses and single-family residences to the west; see **Figure 2: Local Vicinity Map**. The Project Site is currently improved with a two-story commercial office building that is currently vacant, and an ancillary one-story building.

The Project would demolish and remove the existing improvements and construct a state of the art data center including approximately 218,400 square feet that would include approximately 109,970 square feet of data hall space and approximately 91,889 square feet of support space, which would consist of offices and meeting rooms, employee amenities (such as restrooms, break room, etc.), truck loading and unloading areas, storage areas, mechanical/electrical/fiber entry rooms, and other ancillary uses. See **Figure 3: Conceptual Site Plan**. The Project would include a 24,000 square foot electrical substation to be constructed on the northeastern portion of the site. To provide power during an interruption in SCE service, the Applicant would also install 14 diesel emergency generator sets (gen-set). Each gen-set would be capable of producing 4 megawatts (MW) to be used in the event of an emergency.

A total of sixty-eight (68) parking spaces would be provided adjacent to the eastern side of the proposed data center buildings, including three handicapped accessible spaces and three spaces for electrical vehicles (EV). The Project would also include two loading dock areas to accommodate deliveries and loading activities for the proposed data center. Vehicular access to the Project Site would be provided via two new gated driveways located along Saturn Street: one along the western perimeter of the Project Site and the other along the eastern perimeter of the Project Site.



Source: Google Earth, January 29, 2024.

FIGURE 1: REGIONAL VICINITY MAP

1977 Saturn Data Center Project

NOT TO SCALE

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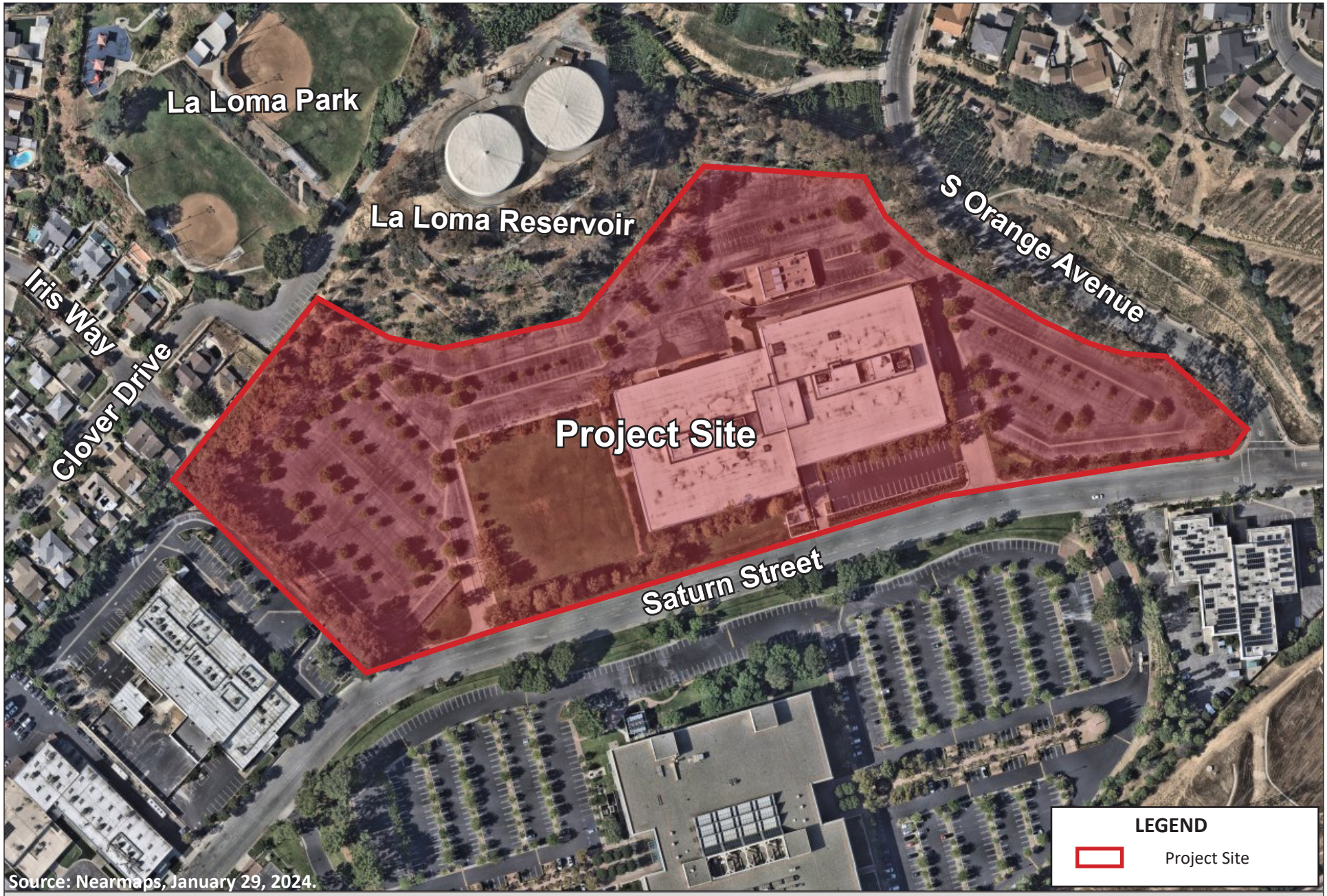

FIGURE 2: LOCAL VICINITY MAP
1977 Saturn Data Center Project

NOT TO SCALE

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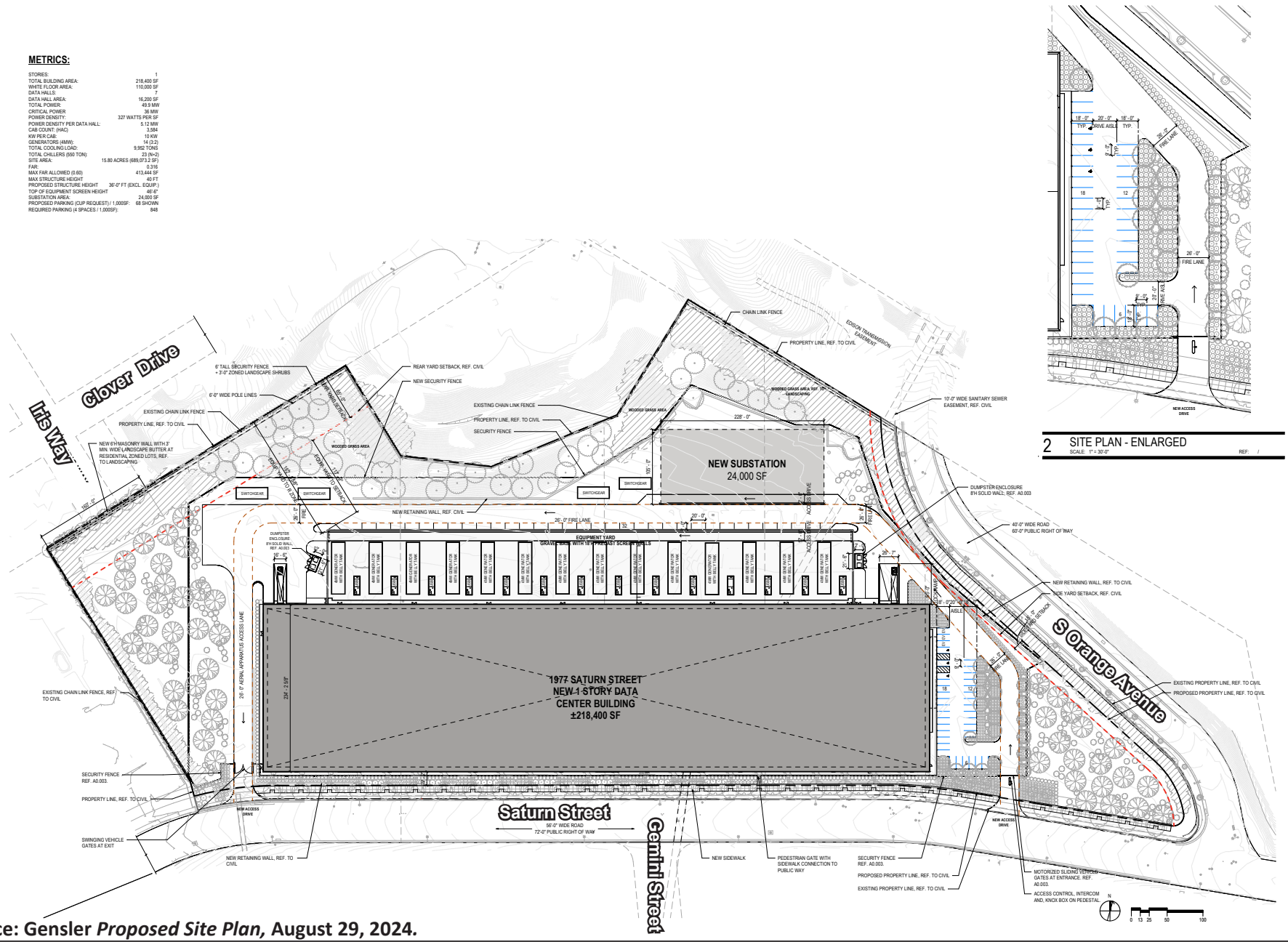

Source: Gensler *Proposed Site Plan,* August 29, 2024.

FIGURE 3: CONCEPTUAL SITE PLAN

1977 Saturn Data Center Project

NOT TO SCALE

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Project construction is anticipated to occur in two phases, lasting approximately two years, beginning as early as September 2025 and ending as early as August 2027. For purposes of this environmental analysis, opening year is assumed to be 2027. Grading for the proposed improvements would require cut and fill to create building pads. Project construction is estimated to require the export of approximately 65,000 cubic yards (cy) of soil.

3.0 Background

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns and precipitation. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), as well as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These "greenhouse" gases (GHGs) allow solar radiation (sunlight) into the Earth's atmosphere but prevent radiative heat from escaping, thus warming the Earth's atmosphere. GHGs are emitted by both natural processes and human activities. Concentrations of GHG have increased in the atmosphere since the industrial revolution. Human activities that generate GHG emissions include combustion of fossil fuels (CO_2 and N_2O); natural gas generated from landfills, fermentation of manure and cattle farming (CH_4); and industrial processes such as nylon and nitric acid production (N_2O).

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for GWP is CO_2; therefore, CO_2 has a GWP factor of 1. The other main GHGs that have been attributed to human activity include CH_4, which has a GWP factor of 28, and N_2O, which has a GWP factor of 265. When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2 equivalents (CO_2e) and are typically quantified in metric tons (MT) or million metric tons (MMT).

4.0 Regulatory Framework

Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

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

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the U.S. EPA's assessment of the scientific evidence that form the basis for the U.S. EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the U.S. EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the U.S. EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, U.S. EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency.

On April 2, 2018, the Administrator signed the Mid-term Evaluation Final Determination which finds that the model year 2022-2025 GHG standards are not appropriate in light of the record before U.S. EPA and, therefore, should be revised.[1]

On September 19, 2019, under the Safer, Affordable, Fuel-Efficient (SAFE) Vehicles Rule, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHSTA) and the U.S. EPA issued the final "One National Program Rule." The rule states that federal law preempts state and local laws regarding tailpipe GHG emissions standards, zero emissions vehicle (ZEV) mandates, and fuel economy for automobiles and light duty trucks. The rule revokes California's Clean Air Act waiver and preempts California's Advanced Clean Car Regulations.[2,3]

On September 20, 2019, a lawsuit was filed by California and a coalition of 22 other states, and the cities of Los Angeles, New York and Washington, D.C., in the United States District Court for the District of Columbia (Case 1:19-cv-02826) challenging the SAFE Rule and arguing that U.S. EPA lacks the legal authority to withdraw the California waiver. In April 2021, the U.S. EPA announced it would reconsider its previous withdrawal and grant California permission to set more stringent climate requirements for cars and SUVs. On March 9, 2022, the U.S. EPA restored California's 2013 waiver to full force, including both its GHG standards and ZEV sales requirements.

In December 2021, the U.S. EPA finalized federal GHG emissions standards for passenger cars and light trucks for Model Years 2023 through 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and are based on sound science and grounded in a rigorous assessment of current and future technologies. The updated standards will result in avoiding more than three billion tons of GHG emissions through 2050.[4]

Presidential Executive Orders 13990 and 14008

On January 20, 2021, President Biden issued Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis". Executive Order 13990 directs Federal agencies to immediately review and take action to address the promulgation of Federal regulations and other actions that conflict with these important national objectives and to

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1 U.S. Environmental Protection Agency. Midterm Evaluation of Light-Duty Vehicle Greenhouse Gas Emissions Standards for Model Years 2022-2025, https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas. Accessed April 12, 2024.

2 U.S. Department of Transportation and U.S. EPA. 2019. One National Program Rule on Federal Preemption of State Fuel Economy Standards, https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100XI4W.pdf. Accessed May 7, 2024.

3 Southern California Association of Governments. 2019. Final Federal Safer, Affordable, Fuel-Efficient Vehicles Rule Part I (Supplemental Report), http://www.scag.ca.gov/committees/CommitteeDocLibrary/EEC_Item8_RC_Item10%20Supplemental%20Report.pdf. Accessed May 7, 2024.

4 U.S. EPA, Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026, 2021, https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions. Accessed March 18, 2024.

immediately commence work to confront the climate crisis. Executive Order 13990 directs the Council on Environmental Quality (CEQ) to review CEQ's 2020 regulations implementing the procedural requirements of the National Environmental Policy Act (NEPA) and identify necessary changes or actions to meet the objectives of Executive Order 13990.

Executive Order 13390 also directs the U.S. EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under the "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks," promulgated in April 2020.

On January 27, 2021, President Biden signed Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad," to declare the Administration's policy to move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories. In line with these Executive Order directives, CEQ is reviewing the 2020 NEPA regulations and plans to publish a notice of proposed rulemaking (NPRM) to identify necessary revisions in order to comply with the law; meet the environmental, climate change, and environmental justice objectives of Executive Orders 13990 and 14008; ensure full and fair public involvement in the NEPA process; provide regulatory certainty to stakeholders; and promote better decision making consistent with NEPA's statutory requirements. This phase 1 rulemaking will propose a narrow set of changes to the 2020 NEPA regulations to address these goals.

State

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 369 million gross metric tons of CO_2e in 2020.[5] In the State, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance

[5] California Air Resources Board, Current California GHG Emissions Inventory Data, 2000-2020 GHG inventory (2022 Edition), https://ww2.arb.ca.gov/ghg-inventory-data. Accessed March 18, 2024.

energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020, which would require a reduction of approximately 173 MMT net CO_2e below "business as usual" emission levels. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

Climate Change Scoping Plan

The Scoping Plan is a GHG emission reduction roadmap developed and updated by the CARB at least once every five years, as required by AB 32. It lays out the transformations needed across various sectors to reduce GHG emissions and reach the State's climate targets. CARB published the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) in November 2022, as the third update to the initial plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 target of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual activities.[6] The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan Update (adopted in 2014) assessed progress toward achieving the 2020 target and made the case for addressing short-lived climate pollutants (SLCPs).[7] The 2017 Scoping Plan Update,[8] shifted focus to the newer Senate Bill (SB) 32 goal of a 40 percent reduction below 1990 levels by 2030 by laying out a detailed cost-effective and technologically feasible path to this target, and also assessed progress towards achieving the AB 32 goal of returning to 1990 GHG levels by 2020. The 2020 goal was ultimately reached in 2016, four years ahead of the schedule called for under AB 32.

The 2022 Scoping Plan Update is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in

[6] CARB, Climate Change Scoping Plan, 2008, ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed April 22, 2024.

[7] CARB, First Update to the Climate Change Scoping Plan, 2014, ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed April 22, 2024.

[8] CARB, California's 2017 Climate Change Scoping Plan, 2017, ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf. Accessed April 22, 2024.

the 2017 Scoping Plan. According to the Scoping Plan Update, the 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan Update incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan Update also includes discussion for the first time of the natural and working lands sectors as sources for both sequestration and carbon storage, and as sources of emissions as a result of wildfires. **Table 1: Statewide Greenhouse Gas Emission Projections** shows the GHG emissions associated with various emissions scenarios.

Table 1: Statewide Greenhouse Gas Emission Projections

Emissions Scenario as Presented in the 2022 Scoping Plan Update	GHG Emissions ($MMTCO_2e$ per year)
2019	
2019 State GHG Emissions	404
2030	
2030 BAU Forecast	312
2030 GHG Emissions without Carbon Removal and Capture	233
2030 GHG Emissions with Carbon Removal and Capture	226
2030 Emissions Target Set by AB 32 (i.e., 1990 level by 2030)	260
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2030	52 (16.7%)[1]
2045	
2045 BAU Forecast	266
2045 GHG Emissions without Carbon Removal and Capture	72
2045 GHG Emissions with Carbon Removal and Capture	(3)

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values.
1. (312 – 260) / 312 = 16.7%
Source: CARB, Final 2022 Climate Change Scoping Plan, November 2022.

The 2022 Scoping Plan Update reflects existing and recent direction in the Governor's Executive Orders and State Statutes, which identify policies, strategies, and regulations in support of and implementation of the Scoping Plan. Among these include Executive Order B-55-18 and AB 1279 (The California Climate Crisis Act), which identify the 2045 carbon neutrality and GHG reduction targets required for the Scoping Plan.

Table 2: Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan provides a summary of major climate legislation and executive orders issued since the adoption of the 2017 Scoping Plan.

Table 2: Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan	
Bill/Executive Order	**Summary**
Assembly Bill 1279 (AB 1279) (Muratsuchi, Chapter 337, Statutes of 2022) *The California Climate Crisis Act*	AB 1279 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that the Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO_2 removal solutions and carbon capture, utilization, and storage (CCUS) technologies. This bill is reflected directly in the 2022 Scoping Plan Update.
Senate Bill 905 (SB 905) (Caballero, Chapter 359, Statutes of 2022) *Carbon Capture, Removal, Utilization, and Storage Program*	SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal (CDR) projects and technology. The bill requires CARB, on or before January 1, 2025, to adopt regulations creating a unified state permitting application for approval of CCUS and CDR projects. The bill also requires the Secretary of the Natural Resources Agency to publish a framework for governing agreements for two or more tracts of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project. The 2022 Scoping Plan Update modeling reflects both CCUS and CDR contributions to achieve carbon neutrality.
Senate Bill 846 (SB 846) (Dodd, Chapter 239, Statutes of 2022) *Diablo Canyon Powerplant: Extension of Operations*	SB 846 extends the Diablo Canyon Power Plant's sunset date by up to five additional years for each of its two units and seeks to make the nuclear power plant eligible for federal loans. The bill requires that the California Public Utilities Commission (CPUC) not include and disallow a load-serving entity from including in their adopted resource plan, the energy, capacity, or any attribute from the Diablo Canyon power plant. The 2022 Scoping Plan Update explains the emissions impact of this legislation.
Senate Bill 1020 (SB 1020) (Laird, Chapter 361, Statutes of 2022) *Clean Energy, Jobs, and Affordability Act of 2022*	SB 1020 adds interim renewable energy and zero carbon energy retail sales of electricity targets to California end-use customers set at 90 percent in 2035 and 95 percent in 2040. It accelerates the timeline required to have 100 percent renewable energy and zero carbon energy procured to serve state agencies from the original target year of 2045 to 2035. This bill requires each state agency to individually achieve the 100 percent goal by 2035 with specified

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	requirements. This bill requires the CPUC, California Energy Commission (CEC), and CARB, on or before December 1, 2023, and annually thereafter, to issue a joint reliability progress report that reviews system and local reliability. The bill also modifies the requirement for CARB to hold a portion of its Scoping Plan workshops in regions of the state with the most significant exposure to air pollutants by further specifying that this includes communities with minority populations or low-income communities in areas designated as being in extreme federal non-attainment. The 2022 Scoping Plan Update describes the implications of this legislation on emissions.
Senate Bill 1137 (SB 1137) (Gonzales, Chapter 365, Statutes of 2022) *Oil & Gas Operations: Location Restrictions: Notice of Intention: Health protection zone: Sensitive receptors*	SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.
Senate Bill 1075 (SB 1075) (Skinner, Chapter 363, Statutes of 2022) *Hydrogen: Green Hydrogen: Emissions of Greenhouse Gases*	SB 1075 requires CARB, by June 1, 2024, to prepare an evaluation that includes: policy recommendations regarding the use of hydrogen, and specifically the use of green hydrogen, in California; a description of strategies supporting hydrogen infrastructure, including identifying policies that promote the reduction of GHGs and short-lived climate pollutants; a description of other forms of hydrogen to achieve emission reductions; an analysis of curtailed electricity; an estimate of GHG and emission reductions that could be achieved through deployment of green hydrogen through a variety of scenarios; an analysis of the potential for opportunities to integrate hydrogen production and applications with drinking water supply treatment needs; policy recommendations for regulatory and permitting processes associated with transmitting and distributing hydrogen from production sites to end uses; an analysis of the life-cycle GHG emissions from various forms of hydrogen production; and an analysis of air pollution and other environmental impacts from hydrogen distribution and end uses.

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	This bill informs the production of hydrogen at the scale called for in the 2022 Scoping Plan Update.
Assembly Bill 1757 (AB 1757) (Garcia, Chapter 341, Statutes of 2022) *California Global Warming Solutions Act of 2006: Climate Goal: Natural and Working Lands*	AB 1757 requires the California Natural Resources Agency (CNRA), in collaboration with CARB, other state agencies, and an expert advisory committee, to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions in 2030, 2038, and 2045 by January 1, 2024. These targets must support state goals to achieve carbon neutrality and foster climate adaptation and resilience. This bill also requires CARB to develop standard methods for state agencies to consistently track GHG emissions and reductions, carbon sequestration, and additional benefits from natural and working lands over time. These methods will account for GHG emissions reductions of CO2, methane, and nitrous oxide related to natural and working lands and the potential impacts of climate change on the ability to reduce GHG emissions and sequester carbon from natural and working lands, where feasible. This 2022 Scoping Plan Update describes the next steps and implications of this legislation for the natural and working lands sector.
Senate Bill 1206 (SB 1206) (Skinner, Chapter 884, Statutes of 2022) *Hydrofluorocarbon gases: sale or distribution*	SB 1206 mandates a stepped sales prohibition on newly produced high- global warming potential (GWP) HFCs to transition California's economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment. Additionally, SB 1206 also requires CARB to develop regulations to increase the adoption of very low-, i.e., GWP < 10, and no-GWP technologies in sectors that currently rely on higher-GWP HFCs.
Senate Bill 27 (SB 27) (Skinner, Chapter 237, Statutes of 2021) *Carbon Sequestration: State Goals: Natural and Working Lands: Registry of Projects*	SB 27 requires CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This bill also requires CARB to establish specified CO2 removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is to establish and maintain a registry to identify projects in the state that drive climate action on natural and working lands and are seeking funding. CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry. This bill is reflected directly in the 2022 Scoping Plan Update as CO_2 removal targets for 2030 and 2045 in support of carbon neutrality.

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Executive Order N-82-20	Governor Newsom signed Executive Order N-82-20 in October 2020 to combat the climate and biodiversity crises by setting a statewide goal to conserve at least 30 percent of California's land and coastal waters by 2030. The Executive Order also instructed the CNRA, in consultation with other state agencies, to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the state's carbon neutrality goal and build climate resilience. In addition to setting a statewide conservation goal, the Executive Order directed CARB to update the target for natural and working lands in support of carbon neutrality as part of this Scoping Plan, and to take into consideration the NWL Climate Smart Strategy. CO2 Executive Order N-82-20 also calls on the CNRA, in consultation with other state agencies, to establish the California Biodiversity Collaborative (Collaborative). The Collaborative shall be made up of governmental partners, California Native American tribes, experts, business and community leaders, and other stakeholders from across the state. State agencies will consult the Collaborative on efforts to: • Establish a baseline assessment of California's biodiversity that builds upon existing data and can be updated over time. • Analyze and project the impact of climate change and other stressors in California's biodiversity. • Inventory current biodiversity efforts across all sectors and highlight opportunities for additional action to preserve and enhance biodiversity. CNRA also is tasked with advancing efforts to conserve biodiversity through various actions, such as streamlining the state's process to approve and facilitate projects related to environmental restoration and land management. The California Department of Food and Agriculture (CDFA) is directed to advance efforts to conserve biodiversity through measures such as reinvigorating populations of pollinator insects, which restore biodiversity and improve agricultural production. The Natural and Working Lands Climate Smart Strategy informs the 2022 Scoping Plan Update.
Executive Order N-79-20	Governor Newsom signed Executive Order N-79-20 in September 2020 to establish targets for the transportation sector to support the state in its goal to achieve carbon neutrality by 2045. The targets established in this Executive Order are:

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	• 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. • 100 percent of medium- and heavy-duty vehicles will be zero-emission by 2045 for all operations where feasible, and by 2035 for drayage trucks. • 100 percent of off-road vehicles and equipment will be zero-emission by 2035 where feasible. The Executive Order also tasked CARB to develop and propose regulations that require increasing volumes of zero- electric passenger vehicles, medium- and heavy-duty vehicles, drayage trucks, and off-road vehicles toward their corresponding targets of 100 percent zero-emission by 2035 or 2045, as listed above. The 2022 Scoping Plan Update modeling reflects achieving these targets.
Executive Order N-19-19	Governor Newsom signed Executive Order N-19-19 in September 2019 to direct state government to redouble its efforts to reduce GHG emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy. This Executive Order instructs the Department of Finance to create a Climate Investment Framework that: • Includes a proactive strategy for the state's pension funds that reflects the increased risks to the economy and physical environment due to climate change. • Provides a timeline and criteria to shift investments to companies and industry sectors with greater growth potential based on their focus of reducing carbon emissions and adapting to the impacts of climate change. • Aligns with the fiduciary responsibilities of the California Public Employees' Retirement System, California State Teachers' Retirement System, and the University of California Retirement Program. Executive Order N-19-19 directs the State Transportation Agency to leverage more than $5 billion in annual state transportation spending to help reverse the trend of increased fuel consumption and reduce GHG emissions associated with the transportation sector. It also calls on the Department of General Services to leverage its management and ownership of the state's 19 million square feet in managed buildings, 51,000 vehicles, and other physical assets and goods to minimize state government's carbon footprint. Finally, it tasks CARB

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	with accelerating progress toward California's goal of five million ZEV sales by 2030 by: • Developing new criteria for clean vehicle incentive programs to encourage manufacturers to produce clean, affordable cars. • Proposing new strategies to increase demand in the primary and secondary markets for ZEVs. • Considering strengthening existing regulations or adopting new ones to achieve the necessary GHG reductions from within the transportation sector. The 2022 Scoping Plan Update modeling reflects efforts to accelerate ZEV deployment.
Assembly Bill 65 (AB 65) (Petrie-Norris, Chapter 347, Statutes of 2019) *Coastal Protection: Climate Adaption: Project Prioritization: Natural Infrastructure: Local General Plans*	This bill requires the State Coastal Conservancy, when it allocates any funding appropriated pursuant to the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018, to prioritize projects that use natural infrastructure in coastal communities to help adapt to climate change. The bill requires the conservancy to provide information to the Office of Planning and Research on any projects funded pursuant to the above provision to be considered for inclusion into the clearinghouse for climate adaptation information. The bill authorizes the conservancy to provide technical assistance to coastal communities to better assist them with their projects that use natural infrastructure.
Executive Order B-55-18	Governor Brown signed Executive Order B-55-18 in September 2018 to establish a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Policies and programs undertaken to achieve this goal shall: • Seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities. • Be implemented in a manner that supports climate adaptation and biodiversity, including protection of the state's water supply, water quality, and native plants and animals. This Executive Order also calls for CARB to: • Develop a framework for implementation and accounting that tracks progress toward this goal.

Table 2: Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan	
Bill/Executive Order	**Summary**
	• Ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The 2022 Scoping Plan Update is designed to achieve carbon neutrality no later than 2045 and the modeling includes technology and fuel transitions to achieve that outcome.
Senate Bill 100 (SB 100) (De León, Chapter 312, Statutes of 2018) *California Renewables Portfolio Standard Program: emissions of greenhouse gases*	Under SB 100, the CPUC, CEC, and CARB shall use programs under existing laws to achieve 100 percent clean electricity. The statute requires these agencies to issue a joint policy report on SB 100 every four years. The first of these reports was issued in 2021. The 2022 Scoping Plan Update reflects the SB 100 Core Scenario resource mix with a few minor updates.
Assembly Bill 2127 (AB 2127) (Ting, Chapter 365, Statutes of 2018) *Electric Vehicle Charging Infrastructure: Assessment*	This bill requires the CEC, working with CARB and the CPUC, to prepare and biennially update a statewide assessment of the electric vehicle charging infrastructure needed to support the levels of electric vehicle adoption required for the state to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030 and of reducing emissions of GHGs to 40 percent below 1990 levels by 2030. The bill requires the CEC to regularly seek data and input from stakeholders relating to electric vehicle charging infrastructure. This bill supports the deployment of ZEVs as modeled in the 2022 Scoping Plan Update.
Senate Bill 30 (SB 30) (Lara, Chapter 614, Statutes of 2018) *Insurance: Climate Change*	This bill requires the Insurance Commissioner to convene a working group to identify, assess, and recommend risk transfer market mechanisms that, among other things, promote investment in natural infrastructure to reduce the risks of climate change related to catastrophic events, create incentives for investment in natural infrastructure to reduce risks to communities, and provide mitigation incentives for private investment in natural lands to lessen exposure and reduce climate risks to public safety, property, utilities, and infrastructure. The bill requires the policies recommended to address specified questions.

Table 2: Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan	
Bill/Executive Order	**Summary**
Assembly Bill 2061 (AB 2061) (Frazier, Chapter 580, Statutes of 2018) *Near-zero-emission and Zero-emission Vehicles*	Existing state and federal laws set specified limits on the total gross weight imposed on the highway by a vehicle with any group of two or more consecutive axles. Under existing federal law, the maximum gross vehicle weight of that vehicle may not exceed 82,000 pounds. AB 2061 authorizes a near-zero- emission vehicle or a zero-emission vehicle to exceed the weight limits on the power unit by up to 2,000 pounds. This bill supports the deployment of cleaner trucks as modeled in this 2022 Scoping Plan Update.

The 2022 Scoping Plan Update scenario identifies the need to accelerate AB 32's 2030 target, from 40 percent to 48 percent below 1990 levels. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet these GHG reduction goals and achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology. The Scoping Plan Scenario is summarized in Table 2-1 starting on page 72 of the Scoping Plan. It includes references to relevant statutes and Executive Orders, although it is not comprehensive of all existing new authorities for directing or supporting the actions described. Table 2-1 identifies actions related to a variety of sectors such as: smart growth and reductions in Vehicle Miles Traveled (VMT); light-duty vehicles (LDV) and zero-emission vehicles (ZEV); truck ZEVs; reduce fossil energy, emissions, and GHGs for aviation ocean-going vessels, port operations, freight and passenger rail, oil and gas extraction; and petroleum refining; improvements in electricity generation; electrical appliances in new and existing residential and commercial buildings; electrification and emission reductions across industries such as the for food products, construction equipment, chemicals and allied products, pulp and paper, stone/clay/glass/cement, other industrial manufacturing, and agriculture; retiring of combined heat and power facilities; low carbon fuels for transportation, business, and industry; improvements in non-combustion methane emissions, and introduction of low GWP refrigerants.

Achieving the targets described in the 2022 Scoping Plan Update will require continued commitment to and successful implementation of existing policies and programs, and identification of new policy tools and technical solutions to go further, faster. California's Legislature and state agencies will continue to collaborate to achieve the state's climate, clean air, equity, and broader economic and environmental protection goals. It will be necessary to maintain and strengthen this collaborative

effort, and to draw upon the assistance of the federal government, regional and local governments, tribes, communities, academic institutions, and the private sector to achieve the state's near-term and longer-term emission reduction goals and a more equitable future for all Californians. The Scoping Plan acknowledges that the path forward is not dependent on one agency, one state, or even one country. However, the State can lead by engaging Californians and demonstrating how actions at the state, regional, and local levels of governments, as well as action at community and individual levels, can contribute to addressing the challenge.

Aligning local jurisdiction action with state-level priorities to tackle climate change and the outcomes called for in the 2022 Scoping Plan Update is identified as critical to achieving the statutory targets for 2030 and 2045. The 2022 Scoping Plan Update discusses the role of local governments in meeting the State's GHG reductions goals. Local governments have the primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can choose to support transit, walking, bicycling, and neighborhoods that do not force people into cars. Local governments also have the option to adopt building ordinances that exceed statewide building code requirements and play a critical role in facilitating the rollout of ZEV infrastructure. As a result, local government decisions play a critical role in supporting state-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment—the two largest GHG emissions sectors over which local governments have authority. The City has taken the initiative in combating climate change by developing programs and regulations such as the Green New Deal and Green Building Code. Each of these is discussed further below.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards. California's Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy

efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016, went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018, and went into effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

On August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards (2022 Energy Code). In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[9]

Title 24 California Green Building Standards Code. The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2023 (2022 CALGreen). The 2022 CALGreen standards continue to improve upon the existing standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

Regional

South Coast Air Quality Management District Thresholds

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) are attained and maintained in the South Coast Air Basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to

[9] California Energy Commission, 2022 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed March 9, 2024.

reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to applicable SCAQMD rules and regulations in effect at the time of construction and operation. The following is the SCAQMD rule relevant to GHG:

- **Rule 1415 (Reduction of Refrigerant Emissions from Stationary Air Conditioning Systems)** – The purpose of this rule is to reduce emissions of high-global warming potential refrigerants from stationary air conditioning systems by requiring projects to reclaim, recover, or recycle refrigerant and minimize leakage.

Southern California Association of Governments

On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy [2020 RTP/SCS]). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

Local

City of Monterey Park General Plan

The City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City's General Plan includes a Sustainable Community Element, adopted in 2014, that contains the following policies specific to greenhouse gas emissions applicable to the Project:

Sustainability Community Element

Goal 9: Greenhouse gas emissions from energy production are minimized through reduced energy demand and expanded use of renewable energy sources.

Policy 9.1 Increased Energy Efficiency: Ensure high energy efficiency for all buildings through demonstration, education, and incentives.

Policy 9.3 Solar-Ready Roofs: For new construction and renovations, encourage builders to provide roofs that are solar panel-ready particularly commercial roofs.

City of Monterey Park Climate Action Plan (CAP)

The City's qualified Climate Action Plan (CAP), approved in 2012, provides the City's road map to reducing community GHG emissions associated with existing and future actions and activities. The CAP was adopted by the City Council on October 3, 2012. The CAP included baseline emissions inventory and projection of future emissions; establishing a community-wide reduction target for 2020 and 2035; identify strategies, actions, and measures to meet reduction targets; evaluate CEQA impacts of the proposed strategies; and monitor effectiveness of reduction measures and the CAP to changing conditions. The CAP establishes a policy to reduce the City's GHG emissions by 15 percent below baseline 2009 levels by 2020, and sets an aspirational goal of achieving GHG emissions 49 percent below baseline 2009 levels by 2035. The CAP does not include quantitative project-level CEQA thresholds or percentage reduction targets for individual projects.

The CAP includes numerous GHG reduction measures, split into five categories: Energy, Land Use, Transportation, Water, and State and Federal. The State and Federal measures would account for 67.9 percent reduction in GHG emissions. The remaining four categories are considered City measures. The complete list of GHG reduction measures is shared in Threshold (b) below. Generally, the purpose of the CAP is to establish measures capable of reducing GHG and promoting economic growth based on clean technology and sustainable practices.

5.0 Significance Criteria and Methodology

5.1 Thresholds of Significance Criteria

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. The CEQA Guidelines allow lead agencies to determine the thresholds of significance based to the extent possible on scientific and factual data that illustrate the extent of an impact. This means that each agency may determine whether to: (1) quantify greenhouse gas emissions resulting from a project; and/or (2) rely on a qualitative analysis or performance-based standard. CEQA Guidelines Section 15064.4(a) directs that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the Project's GHG emissions.

Appendix G of the CEQA Guidelines sets forth two general thresholds that state whether the project would:

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

As discussed above, no applicable numeric significance threshold for GHG emissions has been adopted by the State, SCAQMD, or the City that applies to the proposed Project. Further, although State, regional, and local plans and policies have been adopted to help address climate change (see discussions above), no current law or regulation would regulate all aspects of the Project's GHG emissions. In the absence of any adopted numeric threshold, the City has determined that the significance of the Project's GHG emissions as provided in CEQA Guidelines Section 15064.4(b)(2) will be assessed by determining whether the Project is consistent with applicable plans, policies, regulations adopted for the purpose of reducing the emissions of greenhouse gases.

Therefore, under this analysis, a significant impact would occur if the Project would conflict with applicable regulatory plans and policies of the lead agency (i.e., the City of Monterey Park) to reduce GHG emissions discussed within the City's CAP. The analysis below describes the extent to which the Project complies with the regulations outlined in the CAP.

Notwithstanding the above, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using air quality models. The primary purpose of quantifying the Project GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. However, the significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project.

5.2 Methodology

The Project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2022.1.1.21 (CalEEMod). Details of the modeling assumptions and emission factors are provided in **Attachment A: Greenhouse Gas Emissions Data**. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The Project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The Project's operational-related GHG emissions would be generated by vehicular traffic, area sources (e.g., landscaping maintenance and consumer products), electrical generation demand, natural gas consumption, water supply and wastewater treatment, solid waste, water usage, and energy usage.

6.0 Impact Analysis

Threshold (a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Threshold (b) Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions?

Consistency with Applicable Plans and Policies

The Project would replace an older building that occupies the site currently and would be subject to compliance with all building codes in effect at the time of construction, which would include energy conservation measures mandated by Title 24 of the California Building Standards Code – Energy Efficiency Standards. Because Title 24 standards require energy conservation features in new construction (e.g., high- efficiency lighting, high-efficiency heating, ventilating, and air-conditioning [HVAC] systems, thermal insulation, double-glazed windows, water conserving plumbing fixtures), they indirectly regulate and reduce GHG emissions. California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The most recent 2019 standards went into effect January 1, 2020. The 2022 Energy Code and associated Title 24 standards went into effect January 1, 2023.

Consistency with the City of Monterey Park Climate Action Plan

In 2012, the City adopted the CAP which sets forth a comprehensive strategy to address GHG emissions related to land use patterns, transportation, building design, energy use, water demand, and waste generation. The Project's consistency with the CAP is analyzed in **Table 3: City of Monterey Park Climate Action Plan Measures Consistency**.

Table 3: City of Monterey Park Climate Action Plan Consistency

Measure	Description	Consistency
Building Efficiency		
E1. Efficiency Requirements for New Developments	The City, in coordination with the California Building Standards Commission and the California Energy Commission, will adopt energy efficiency regulations for new construction projects that comply with the 2008 California Green Building Code Tier 1 energy efficiency standards. The Tier 1 energy efficiency standards require a building's energy performance to exceed Title 24 standards by 15 percent for both	**Consistent**: The proposed Project would comply with California Green Building Standards Code (CCR Title 24, Part 11 Code) (CALGreen) which requires new residential and nonresidential buildings to comply with mandatory measures including energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. The Project would be required to comply with the provisions of the CALGreen standards. In addition,

Table 3: City of Monterey Park Climate Action Plan Consistency		
Measure	**Description**	**Consistency**
	residential and nonresidential development.	the Project would have three EV charging spaces.
E2. Building Retrofits	31 percent of total GHG emissions in the City are a result of energy used for commercial and residential buildings. Since the vast majority of buildings in the City were built before 2002, there is tremendous potential to increase the overall energy efficiency of buildings in the City with a range of energy efficiency upgrades.	**N/A**: This is not applicable to the Project. The Project would demolish and remove the existing improvements and construct a new data center. As building standards and efficiency has improved since the construction of the original building the replacement structure would be more energy efficient.
E3. Appliance Upgrade	The City will partner with SCE, the SoCal Gas, and the Metropolitan Water District to provide to increase awareness about rebate and incentive programs, the efficiencies that may be gained from Energy-Star-rated appliances, and the cost savings associated with Energy Star appliances.	**Consistent:** The Project would utilize energy efficient appliances and comply with the latest Title 24 energy efficiency requirements. In addition, the Project would not include natural gas.
E4. Smart Meters	Emerging energy management systems or Smart Meters are currently being stalled by SCE as a means to improve how electricity consumption is managed. These Smart Meters will eventually provide utility customers with access to detailed and instantaneous energy use and cost information, new pricing programs based on peak-energy demand, and the ability to program home appliances and devices to respond to cost, comfort, and convenience.	**Consistent:** The Project's utility provider (SCE) would install smart meters upon development.
Increase Renewable Energy Generation		
R1. Solar Water Heating	Solar hot water systems are a simple, reliable, and cost-effective method for harnessing the sun's energy to provide hot water. Solar collectors, usually placed on the roof, absorb the sun's energy to heat water that is stored in a water tank. Although solar water	**N/A:** The Project plumbing is not designed to include a hot water system that requires water to be stored in a water tank. Thus, this measure is not applicable. In any case, the Project would include rooftop design that is photovoltaic-system ready, which would allow solar energy to be distributed

Table 3: City of Monterey Park Climate Action Plan Consistency		
Measure	**Description**	**Consistency**
	heater upgrades require an up-front investment from the resident or business owner, there is a range of financing and rebate options available to offset these initial costs.	to project demand. See additional analysis under Measure R2.
R2. Solar Photovoltaic Systems	Solar photovoltaic (PV) systems generate electrical power by converting solar radiation into direct-current electricity using semiconductors. PV systems can be retrofitted into existing buildings, usually by mounting them onto an existing roof structure or walls. The City will promote PV installations to provide 5 percent of residential electricity and 2 percent of commercial electricity energy use from solar PV generation by 2020.	**Consistent:** The Project would construct new buildings on the Project Site that could accommodate limited solar photovoltaic systems on the roof to offset overall energy demand. Due to rooftop mechanical equipment, and related screening elements to comply with code, the solar PV systems cannot not occupy the entire roof area. Approximately 45,000 square feet could accommodate future photovoltaic installation, which could result in a maximum output between 750 to 900 kilowatts of energy. Nonetheless, the Project would include rooftop building design that is compatible with a solar photovoltaic system on a portion of the roofed areas.
Land Use		
LU1. Mixed Use Development	Increasing the availability, effectiveness, and use of transit could result in a 0.5 percent reduction in overall vehicle miles travelled (VMT) in the City by 2020. To meet the VMT reduction target, the City will create additional incentives to build and actively facilitate new mixed-use development near existing and planned transit corridors.	**N/A:** This is a municipal measure and not Project specific. This measure is intended to encourage and incentivize mixed-use development, which is not applicable to the Project. It should be noted that the land use policies in the CAP encourage infill and redevelopment, which is relevant to, and consistent with, the Project as it redevelops and existing infill site instead of developing undeveloped land.
LU2. Service Nodes	Through changes proposed under the new Zoning Ordinance, the City will provide more opportunities for walking, biking, and short-distance vehicular trips by promoting service nodes, which are employment centers with eating establishments, coffee	**N/A:** This is a municipal measure and not Project specific. Therefore, this measure is not applicable. It should be noted that the land use policies in the CAP encourage infill and redevelopment, which is relevant to, and consistent with, the Project as it redevelops and existing infill site instead of developing undeveloped land. It should

Table 3: City of Monterey Park Climate Action Plan Consistency		
Measure	**Description**	**Consistency**
	shops, day care, dry cleaners, and other services in proximity.	also be noted that the site is in a voter-enacted zone, thus the City amendments to the zoning ordinance are inapplicable here unless voter-enacted.
Transportation		
T1.1 Increase Transit Use: Lower Cost of Riding Transit	The City currently provides discounts to older adults on the purchase of transit passes, which are accepted locally and by regional transit providers. Pending funding availability, the City will expand the program to provide discounts to resident groups, such as students, or increase the subsidy in order to further promote transit use.	**Consistent:** This is a municipal measure and not specifically applicable to the Project. However, T1 encourages the City to expand transit programs to provide discounted transit passes to certain groups. These transit passes and programs would likely be available to employees of the Project who qualify for the City programs, and choose to ride transit to work, and hence the Project is consistent with implementation of this policy.
T1.2 Increase Transit Use: Promote Use of Transit Network	Promoting the availability of local and regional transit options is necessary to increase awareness and ridership. Therefore, the City will develop marketing or outreach programs to promote the use of the Spirit Bus and other transit options. The potential for VMT reduction with implementation of this action is 1% by 2020.	**N/A:** This is a municipal measure and not specifically applicable to the Project. Therefore, this measure is not applicable. It should be noted that the Project is a low VMT generator and would be compatible with any program the City develops to increase awareness of regional transit options, which the employees of the Project may use.
T2.1 Increase Walking and Biking: Expand Pedestrian Network and Increase Bicycle Parking.	The City will focus on implementation of traffic-calming projects and other necessary pedestrian amenities and safety improvements to enable walking as an attractive travel mode. The City will also identify opportunities to install bicycle parking in public areas and work with local employers to facilitate the expansion or provision of end-of-trip facilities.	**Consistent**: This is a municipal measure and not specifically applicable to the Project. However, the Project is consistent with this policy because it does would improve the pedestrian realm by improving the frontages surrounding the Project Site.
T2.2 Increase Walking and Biking Provide End-Of-Trip Facilities	The City will work with local employers to facilitate the expansion or provision of these facilities. As part of the outreach, the City will spotlight the facilities offered to its own employees,	**N/A:** This is a municipal measure and not specifically applicable to the Project. Therefore, this measure is not applicable.

Table 3: City of Monterey Park Climate Action Plan Consistency		
Measure	**Description**	**Consistency**
	which includes bike racks at City Hall, and changing rooms, lockers, and showers for most employees. Research has shown that VMT can be reduced by 2% to 5% through end-of-trip facilities. With 50% of the travel within the City associated with commuting, this action can achieve 1% VMT reduction by 2020.	
T3. Transportation Demand Management (TDM)	Transportation demand management (TDM) is a series of strategies that aim to reduce single-occupancy automobile trips. These strategies frequently target commute trips associated with employment within a community. Under this program, private companies with less than 250 employees would be encouraged, but not required, to implement a TDM program for their employees. The City will designate a TDM Coordinator who will promote these programs at local businesses, show case the current municipal program as an example, and encourage additional TDM at existing and future businesses.	**Consistent:** This is a municipal measure and not specifically applicable to the Project. In addition, the Project would have far fewer than 250 employees and therefore is not required to implement a TDM program. Nonetheless, the Project would not obstruct the efforts of the City's TDM Coordinator to promote TDM programs for local business, and as such is consistent with implementation of this policy by the City.
Water Conservation and Waste Reduction		
W1. Conserving Water	The City, in partnership with the San Gabriel Valley Water District, will continue to develop pilot or demonstration projects related to water conservation. The City will continue to work with the Water District to complete irrigation and revegetation of medians throughout the City with water-efficient irrigation equipment and native vegetation.	**Consistent:** The proposed Project would include landscaping on the site which would consist of native trees, shrubs, grasses, and groundcover, all of which would have very low or low water needs. The Project would include water efficient appliances per City and State codes. In addition, the Project is designed to include data center cooling technologies that minimize water use.
W2. Reducing Waste	This program allows the City to meet the 50 percent landfill diversion mandate required by State law while providing a service to residents and	**Consistent:** The proposed Project would be served by the local solid waste collection and recycling service that

Table 3: City of Monterey Park Climate Action Plan Consistency		
Measure	**Description**	**Consistency**
	businesses. In addition to the Materials Recovery Facility (MRF) program, the City has additional waste diversion and recycling programs, ranging from backyard composting/ smart gardening workshops to participation in County-wide Household Hazardous Waste collection events.	diverts waste consistent with City and State recycling and diversion targets.
Source: City of Monterey Park, 2012, City of Monterey Park Climate Action Plan, https://www.montereypark.ca.gov/DocumentCenter/View/581/Climate-Action-Plan?bidId=. Accessed April 22, 2024.		

As shown in **Table 3,** the proposed Project is consistent with the applicable policies within the City's CAP.

Consistency with the 2022 Scoping Plan

For the State of California, the 2022 Scoping Plan Update sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. The transportation, electricity, and industrial sectors are the largest GHG contributors in the State. The 2022 Scoping Plan Update plans to achieve the AB 1279 targets primarily through zero-emission transportation (e.g., electrifying cars, buses, trains, and trucks). Additional GHG reductions are achieved through decarbonizing the electricity and industrial sectors.

Statewide strategies to reduce GHG emissions in the latest 2022 Scoping Plan Update include implementing SB 100, which would achieve 100 percent clean electricity by 2045; achieving 100 percent zero emission vehicle sales in 2035 through Advanced Clean Cars II; and implementing the Advanced Clean Fleets regulation to deploy zero-electric vehicle buses and trucks. The 2022 Scoping Plan Update would continue to implement SB 375. GHGs would be further reduced through the Cap-and-Trade Program carbon pricing and SB 905. SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon dioxide removal projects and technology. The Project would be compliant with CALGreen, including required number of EV chargers.

The 2022 Scoping Plan Update states that local CAPs that address the State's largest sources of emissions and prioritize transportation electrification, VMT reduction, and building decarbonization, contribute to the alignment between local climate action and the State's climate goals. As indicated above, the proposed Project would be consistent with the City's CAP. Further, project's GHG emissions associated with energy and mobile sources would be further reduced by the 2022 Scoping Plan Update measures described above. It should be noted that the City has no control over vehicle

emissions, however, these emissions would decline in the future due to Statewide measures discussed above, as well as cleaner technology and fleet turnover. In addition, the Project generates minimal VMT and daily traffic trips due to a limited number of employees required to work at and service the data center. Thus, the Project does not create substantial GHG emissions from vehicles in any case.

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan.

As noted above, the thresholds of significance for purposes of CEQA review are consistency with the lead agency's applicable plans regarding reduction of GHG emissions. Nevertheless, for contextual purposes, the Project would not conflict with implementation of the 2022 Scoping Plan.

In conclusion, the Project would not conflict with an applicable plan, policy, or regulation of the lead agency adopted for the purpose of reducing GHG emissions. Therefore, the proposed Project would not result in significant effects.

Quantification of Project Emissions

Short-Term Construction Greenhouse Gas Emissions

The Project would result in direct emissions of GHGs from construction. Construction of the Project would result in direct emissions of CO_2, N_2O, and CH_4 related to the operation of construction equipment, and the transport of materials and construction workers to and from the Project site. The SCAQMD advises that construction GHG emissions be summed and amortized over the lifetime of a project (assumed to be 30 years), then the yearly amount be added to the operational emissions.[10] The annual GHG emissions generated by construction of the Project is shown in **Table 4: Construction Greenhouse Gas Emissions.**

[10] The amortization period of 30-years is based on the standard assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 4: Construction Greenhouse Gas Emissions	
Year	**$MTCO_2e$ per year**
Construction (2025)	511
Construction (2026)	471
Construction (2027)	237
Total	1,219
Amortized Over 30 Years	40.63
Source: CalEEMod version 2022.1. Refer to **Attachment A** for model outputs.	

As shown, the Project would result in the generation of a maximum of 511 $MTCO_2e$ and a minimum of 237 $MTCO_2e$ per year during construction, with an amortized 40.63 $MTCO_2e$ annually. The total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine the annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory. Once construction is complete, the generation of these GHG emissions would cease. Neither the City nor SCAQMD have an adopted threshold of significance for construction related GHG emissions. Therefore, GHG emissions related to construction were quantified and disclosed in this report for informational purposes only.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions would occur over the life of the proposed Project. GHG emissions would result from area sources (consumer products, landscape maintenance equipment, and painting), vehicular traffic, and diesel fuel associated with the emergency generators. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, the emissions associated with solid waste generated from the Project, and any fugitive refrigerants from air conditioning or refrigerators.

The Project electricity usage would be mainly from the operation of the data center. The purpose of a data center is to house computer servers, which require electricity and cooling 24 hours a day to operate. Based on data received from the Applicant, the Project during peak load conditions would have a demand of 49,999 kilowatts per hour (KW/h). The analysis assumes 24/7 operations (8,760 hours per year) which would result in a maximum electrical usage of 437,991 megawatt hours (MWh) per year, including CalEEMod default assumptions for lighting for surface parking. The modeling also conservatively assumed the 14 gen-sets would be used for up to 50 hours per year per generator for testing and maintenance. The generators would utilize diesel fuel.

Power Usage Effectiveness During Operation

Power usage effectiveness (PUE) is a metric to calculate the ratio of total facility power over IT equipment energy. Total facility power is the amount of power the facility uses which includes data center hardware, power delivery components, cooling and lighting systems. Whereas IT equipment includes energy related to the storage and networking equipment, and control equipment. The ideal PUE is one (1) where all power drawn by the facility goes to the IT infrastructure. The average PUE in 2019 was 1.67.[11] The proposed Project is anticipated to have a blended PUE of 1.2 due to free cooling modules on the air-cooled chillers, below the average for data centers. The proposed Project would be more efficient than the average data center.

Total GHG emissions associated with the Project are summarized in **Table 5: Operational Greenhouse Gas Emissions Opening Year**. The Project Site includes an office building that has been vacant since 2016. While the Project conservatively does not take credit for the historical emissions, there was a use on site in 2012 when the CAP was being prepared for the City. Therefore, net emissions would be less than shown in the table.

Table 5: Operational Greenhouse Gas Emissions Opening Year

Emissions Source	$MTCO_2e$ per Year[1]
Amortized Construction Emissions	41
Area Source	5
Emergency Generators [2]	2,062
Mobile	80
Waste	70
Water and Wastewater	27
Refrigeration	0.1
Energy[3]	83,020
Total Emissions	85,305

1. Total values are from CalEEMod and may not add up due to rounding.
2. Emergency backup generator emissions calculated assuming 50 hours per year per generator (14 generators).
3. The servers in the data center were estimated to require approximately 50 MW of power per hour, and operations were conservatively estimated to be 8,760 hours per year. Total MW per year would be 437,991. Total CO_2e in tons per year would be 83,020. The Project does not include natural gas heaters or water heaters.

Source: CalEEMod version 2022.1. Refer to **Attachment A** for model outputs.

[11] Uptime Institute, Annual Data Center Survey Results, 2019, https://datacenter.com/wp-content/uploads/2019/06/data-center-survey-2019.pdf. Accessed May 7, 2024.

As shown above in **Table 5**, the emissions related to electricity use by the data center is a majority of the emissions. Southern California Edison (SCE) is the utility providing electricity to the Project site. SCE's carbon intensity factor in 2022 was 552 lbs CO_2e/MWh which includes 33.2 percent eligible renewable energy in the power mix.[12] Emissions associated with the Project's electricity consumption occur at power production facilities which are covered entities under the State's Cap-and-Trade regulations, which limit total GHG emissions by covered sources with decreasing allocations, and are subject to the RPS standard requiring the GHG intensity of electricity production to decrease steadily. These regulatory schemes serve as the foundation for the State's goal of net neutrality in 2045. Likewise, the implementation of these Statewide measures, including but not limited to SCE procuring and delivery electricity from renewable energy sources result in an annual reduction of GHG emissions associated with operation of the Project.

The Cap-and-Trade program covers approximately 80 percent of California's GHG emissions.[13] The statewide limit on GHG emissions from the capped sectors (i.e., electricity generation, industrial sources, petroleum refining, and cement production) will decline every year, achieving GHG emission reductions throughout the program's duration. The passage of AB 398 in July 2017 extended the duration of the Cap-and-Trade program from 2020 to 2030. The Cap-and-Trade program was extended in 2015 to cover combustion of fossil fuels including transportation fuels used in California. Accordingly, GHG emissions associated with the electricity usage and mobile sources of most projects that are subject to CEQA are covered by the Cap-and-Trade program.

Table 6: Trend of Project Greenhouse Gas Emissions Related to State Mandates shows the Project emissions in the opening year 2027, in 2035, consistent with the City's CAP horizon, and in 2045, the year the State will meet its carbon neutrality goal. **Table 6** also highlights the reduction in mobile emissions as passenger vehicle fleets become cleaner and technology improves. The trends show a steady decrease in Project GHG emissions, consistent with the overarching goals of the State's 2022 Scoping Plan and the City's CAP.

[12] Southern California Edison, 2022 Power Content Label, https://www.energy.ca.gov/filebrowser/download/6072. Accessed April 22, 2024.

[13] California Air Resources Board, Cap-and-Trade Program: Frequently Asked Questions, September 2022. https://ww2.arb.ca.gov/sites/default/files/2022-09/nc-FAQ_CT.pdf. Accessed April 22, 2024.

Table 6: Trend of Project Greenhouse Gas Emissions Related to State Mandates			
	Annual Emissions ($MTCO_2e$ per Year)[1]		
Emissions Source	**2027 (Project Opening)**	**2035 (CAP Horizon)**	**2045 (CA GHG Neutrality)**
Mobile	80	71	67
Area	5	5	5
Energy[2]	83,020	62,657	0
Water	21	18	0
Waste	70	70	70
Generators	2,062	2,062	2,062
Total	85,258	64,883	2,204
1. Total values are from CalEEMod and may not add up due to rounding. 2. The Project does not include natural gas. GHG emissions from electricity are shown to decline in accordance with State mandates and regulations including RPS standard that requires an increasing amount of renewable energy electric utilities procure to comply with the various goals including 50 percent eligible renewable energy resources in 2030. In line with the Governor's mandate emissions in 2045 are shown to achieve the carbon neutrality goal.			
Source: CalEEMod version 2022.1. Refer to **Attachment A** for model outputs.			

As shown above in **Table 5** and **Table 6**, the majority of GHG emissions associated with the Project is the electricity energy use (approximately 97 percent). Because GHG emissions from covered entities are accounted for in the State's GHG future inventories and reduction targets and are subject to existing regulatory schemes to reduce emissions, those emissions are considered consistent with the 2022 Scoping Plan Update.

The Project would include a variety of energy efficiency measures including all applicable City and State green building measures such as California Code of Regulations Title 24, Part 6 (Energy Code) and Part 11 (CALGreen). The Project is designed to minimize wasteful energy consumption, with a projected PUE much lower than the average achieved by data centers. In addition, the Project would be consistent with applicable CAP goals (discussed in detail above) aimed to reduce GHG emissions.

Mitigation Measure: No mitigation is required.

Level of Significance: Less than Significant Impact.

Conclusion

The Project would not conflict with applicable regulatory plans and policies of the lead agency adopted for purposes of reducing emissions of GHGs. Furthermore, because the Project is consistent with such plans, the Project's incremental increase in GHG emissions would not result in a significant

impact on the environment. Therefore, Project implementation would result in less than significant construction and operational GHG impacts. No mitigation measures would be required.

7.0 References

1. California Air Resources Board, *2022 Scoping Plan for Achieving Carbon Neutrality*, November 2022.
2. California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* November 2017.
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4. California Energy Commission, *2022 Building Energy Efficiency Standards*, 2022. Available at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.
5. City of Monterey Park, *City of Monterey Park General Plan*. Available at: https://www.montereypark.ca.gov/253/General-Plan.
6. City of Monterey Park, *City of Monterey Park Draft Climate Action Plan*, 2012. Available at: https://www.montereypark.ca.gov/DocumentCenter/View/581/Climate-Action-Plan?bidId=.
7. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.
8. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.
9. National Highway Traffic Safety Administration, *USDOT Announces New Vehicle Fuel Economy Standards for Model Year 2024-2026*, available at: https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026.
10. National Research Council, *Advancing the Science of Climate Change*, 2010.
11. Southern California Association of Governments, *2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy*, 2020.
12. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #8*, 2009.
13. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, 2009.
14. South Coast Air Quality Management District, *Staff Report: Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, December 5, 2008, Attachment E: *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

15. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.

16. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, 2010.

Attachment A

CalEEMod Modeling Results

Saturn Data Center Project - Construction Only Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Saturn Data Center Project - Construction Only
Construction Start Date	9/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	1977 Saturn St, Monterey Park, CA 91755, USA
County	Los Angeles-South Coast
City	Monterey Park
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4170
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	218	1000sqft	5.01	218,400	113,291	0.00	—	—

Parking Lot	68.0	Space	0.61	0.00	0.00	0.00	—	—
General Office Building	24.0	1000sqft	0.55	24,000	0.00	0.00	—	Proxy to substation

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.23	35.3	27.0	22.8	0.06	0.97	4.17	5.14	0.89	0.78	1.67	—	7,518	7,518	0.36	0.64	9.78	7,729
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.29	3.38	52.2	32.4	0.22	1.37	9.57	10.7	1.26	3.00	4.02	—	31,311	31,311	1.66	4.45	1.71	32,679
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.04	6.60	8.26	11.0	0.02	0.27	1.37	1.64	0.25	0.43	0.68	—	2,984	2,984	0.15	0.32	2.10	3,087
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	1.20	1.51	2.01	< 0.005	0.05	0.25	0.30	0.04	0.08	0.12	—	494	494	0.02	0.05	0.35	511

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.23	2.52	27.0	22.8	0.06	0.97	4.17	5.14	0.89	0.78	1.67	—	7,518	7,518	0.36	0.64	9.78	7,729
2026	1.69	1.39	11.5	18.6	0.03	0.40	1.35	1.75	0.36	0.33	0.69	—	4,687	4,687	0.19	0.23	6.90	4,768
2027	1.38	35.3	7.54	15.0	0.02	0.19	1.76	1.95	0.18	0.43	0.61	—	3,738	3,738	0.16	0.23	7.67	3,818
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.29	3.38	52.2	32.4	0.22	1.37	9.57	10.7	1.26	3.00	4.02	—	31,311	31,311	1.66	4.45	1.71	32,679
2026	1.69	1.39	11.6	17.9	0.03	0.40	1.35	1.75	0.36	0.33	0.69	—	4,633	4,633	0.19	0.23	0.18	4,707
2027	1.12	0.91	6.72	11.3	0.02	0.17	1.35	1.53	0.16	0.33	0.49	—	3,139	3,139	0.10	0.21	0.17	3,205
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.89	0.65	8.26	6.57	0.02	0.27	1.37	1.64	0.25	0.43	0.68	—	2,984	2,984	0.15	0.32	2.10	3,087
2026	1.04	0.86	6.96	11.0	0.02	0.23	0.89	1.12	0.21	0.22	0.43	—	2,797	2,797	0.12	0.15	1.97	2,846
2027	0.51	6.60	2.97	5.28	0.01	0.08	0.63	0.70	0.07	0.15	0.22	—	1,404	1,404	0.04	0.09	1.24	1,434
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.16	0.12	1.51	1.20	< 0.005	0.05	0.25	0.30	0.04	0.08	0.12	—	494	494	0.02	0.05	0.35	511
2026	0.19	0.16	1.27	2.01	< 0.005	0.04	0.16	0.20	0.04	0.04	0.08	—	463	463	0.02	0.02	0.33	471
2027	0.09	1.20	0.54	0.96	< 0.005	0.01	0.11	0.13	0.01	0.03	0.04	—	232	232	0.01	0.02	0.21	237

3. Construction Emissions Details

3.1. Phase 1 Demolition (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.94	2.94	—	0.44	0.44	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	2.94	2.94	—	0.44	0.44	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.68	2.40	< 0.005	0.11	—	0.11	0.10	—	0.10	—	413	413	0.02	< 0.005	—	414
Demolition	—	—	—	—	—	—	0.35	0.35	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.44	< 0.005	0.02	—	0.02	0.02	—	0.02	—	68.4	68.4	< 0.005	< 0.005	—	68.6
Demolition	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	207	207	0.01	0.01	0.76	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.06	4.77	1.85	0.03	0.05	1.04	1.09	0.05	0.28	0.33	—	3,886	3,886	0.21	0.61	9.02	4,082
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	197	197	0.01	0.01	0.02	199
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.06	4.96	1.87	0.03	0.05	1.04	1.09	0.05	0.28	0.33	—	3,887	3,887	0.21	0.61	0.23	4,075
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.0	24.0	< 0.005	< 0.005	0.04	24.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.60	0.22	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.03	0.07	0.47	492
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.98	3.98	< 0.005	< 0.005	0.01	4.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.6	77.6	< 0.005	0.01	0.08	81.4

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	2.08	1.98	< 0.005	0.09	—	0.09	0.08	—	0.08	—	348	348	0.01	< 0.005	—	349
Dust From Material Movement	—	—	—	—	—	—	0.34	0.34	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.36	< 0.005	0.02	—	0.02	0.02	—	0.02	—	57.6	57.6	< 0.005	< 0.005	—	57.8
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	1.03	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	229	229	0.01	0.01	0.02	232
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.03	15.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.53	2.53	< 0.005	< 0.005	< 0.005	2.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Phase 1 Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970

Dust From Material Movement	—	—	—	—	—	—	1.85	1.85	—	0.89	0.89	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.89	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	197	197	0.01	0.01	0.02	199
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	2.15	0.41	35.9	13.6	0.19	0.36	7.53	7.89	0.36	2.06	2.42	—	28,155	28,155	1.53	4.42	1.69	29,511

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.02	11.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.12	0.02	1.99	0.74	0.01	0.02	0.41	0.43	0.02	0.11	0.13	—	1,542	1,542	0.08	0.24	1.54	1,618
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.81	1.81	< 0.005	< 0.005	< 0.005	1.83
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.36	0.13	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	255	255	0.01	0.04	0.26	268

3.7. Phase 1 Building Construction and Utilities (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.53	0.45	4.10	5.40	0.01	0.16	—	0.16	0.15	—	0.15	—	998	998	0.04	0.01	—	1,002
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.75	0.99	< 0.005	0.03	—	0.03	0.03	—	0.03	—	165	165	0.01	< 0.005	—	166
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.30	5.01	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,051	1,051	0.04	0.04	3.56	1,067
Vendor	0.09	0.04	1.37	0.66	0.01	0.02	0.34	0.36	0.01	0.09	0.10	—	1,239	1,239	0.05	0.18	3.35	1,296
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.28	0.34	4.28	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	996	996	0.05	0.04	0.09	1,008
Vendor	0.09	0.04	1.43	0.68	0.01	0.02	0.34	0.36	0.01	0.09	0.10	—	1,239	1,239	0.05	0.18	0.09	1,293
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.15	1.86	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	421	421	0.02	0.02	0.64	427
Vendor	0.04	0.02	0.60	0.28	< 0.005	0.01	0.14	0.15	< 0.005	0.04	0.04	—	516	516	0.02	0.07	0.60	539
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.34	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	69.7	69.7	< 0.005	< 0.005	0.11	70.6
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	85.4	85.4	< 0.005	0.01	0.10	89.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Phase 2 Interior Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.27	6.78	0.01	0.19	—	0.19	0.18	—	0.18	—	947	947	0.04	0.01	—	950
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.27	6.78	0.01	0.19	—	0.19	0.18	—	0.18	—	947	947	0.04	0.01	—	950
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.26	1.62	< 0.005	0.05	—	0.05	0.04	—	0.04	—	226	226	0.01	< 0.005	—	227
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.4	37.4	< 0.005	< 0.005	—	37.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.30	5.01	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,051	1,051	0.04	0.04	3.56	1,067
Vendor	0.09	0.04	1.37	0.66	0.01	0.02	0.34	0.36	0.01	0.09	0.10	—	1,239	1,239	0.05	0.18	3.35	1,296
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.28	0.34	4.28	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	996	996	0.05	0.04	0.09	1,008
Vendor	0.09	0.04	1.43	0.68	0.01	0.02	0.34	0.36	0.01	0.09	0.10	—	1,239	1,239	0.05	0.18	0.09	1,293
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.07	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	241	241	0.01	0.01	0.37	245
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	296	296	0.01	0.04	0.34	309
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.0	40.0	< 0.005	< 0.005	0.06	40.5
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	49.0	49.0	< 0.005	0.01	0.06	51.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Phase 2 Interior Construction (2027) - Unmitigated

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

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

Off-Road Equipment	0.73	0.61	5.03	6.75	0.01	0.17	—	0.17	0.15	—	0.15	—	947	947	0.04	0.01	—	950
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	0.61	5.03	6.75	0.01	0.17	—	0.17	0.15	—	0.15	—	947	947	0.04	0.01	—	950
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	2.09	2.80	< 0.005	0.07	—	0.07	0.06	—	0.06	—	393	393	0.02	< 0.005	—	394
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.38	0.51	< 0.005	0.01	—	0.01	0.01	—	0.01	—	65.0	65.0	< 0.005	< 0.005	—	65.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.28	0.27	4.66	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,031	1,031	0.04	0.04	3.21	1,046
Vendor	0.08	0.04	1.31	0.62	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,215	1,215	0.05	0.17	3.17	1,269
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.27	0.33	3.95	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	977	977	0.01	0.04	0.08	989

Vendor	0.08	0.04	1.36	0.64	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,215	1,215	0.05	0.17	0.08	1,267
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.14	1.72	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	411	411	0.01	0.02	0.57	417
Vendor	0.03	0.02	0.57	0.26	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	—	504	504	0.02	0.07	0.57	526
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.03	0.31	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	68.1	68.1	< 0.005	< 0.005	0.10	69.0
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	83.5	83.5	< 0.005	0.01	0.09	87.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Phase 1 Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.04	0.41	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	86.9	86.9	< 0.005	< 0.005	—	87.2
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.4
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.97	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	203	203	0.01	0.01	0.69	206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.86	1.86	< 0.005	< 0.005	< 0.005	1.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Phase 2 Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	34.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.1	24.1	< 0.005	< 0.005	—	24.2
Architectural Coatings	—	6.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.00	4.00	< 0.005	< 0.005	—	4.01
Architectural Coatings	—	1.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.11	1.86	0.00	0.00	0.41	0.41	0.00	0.10	0.10	—	412	412	0.02	0.01	1.28	418
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	71.7	71.7	< 0.005	< 0.005	0.10	72.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.02	12.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Phase 1 Demolition	Demolition	9/1/2025	10/30/2025	5.00	44.0	—
Phase 1 Site Preparation	Site Preparation	10/31/2025	12/3/2025	5.00	24.0	—
Phase 1 Grading	Grading	12/4/2025	12/31/2025	5.00	20.0	—
Phase 1 Building Construction and Utilities	Building Construction	1/1/2026	8/1/2026	5.00	152	—
Phase 2 Interior Construction	Building Construction	9/1/2026	7/31/2027	5.00	239	—
Phase 1 Paving	Paving	8/2/2026	8/31/2026	5.00	21.0	—
Phase 2 Architectural Coating	Architectural Coating	6/1/2027	8/31/2027	5.00	66.0	—

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
Phase 1 Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Phase 1 Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Phase 1 Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38

Phase 1 Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Phase 1 Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Phase 1 Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Phase 1 Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Phase 1 Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Phase 1 Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Phase 1 Building Construction and Utilities	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Phase 1 Building Construction and Utilities	Cranes	Diesel	Average	1.00	7.00	367	0.29
Phase 1 Building Construction and Utilities	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 1 Building Construction and Utilities	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 1 Building Construction and Utilities	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 2 Interior Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Phase 2 Interior Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Phase 2 Interior Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Phase 2 Interior Construction	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Phase 1 Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Phase 1 Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

Saturn Data Center Project - Operations Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Saturn Data Center Project - Operations
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	1977 Saturn St, Monterey Park, CA 91755, USA
County	Los Angeles-South Coast
City	Monterey Park
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4170
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	218	1000sqft	5.01	218,400	113,291	0.00	—	—

Parking Lot	68.0	Space	0.61	0.00	0.00	0.00	—	—
General Office Building	24.0	1000sqft	0.55	24,000	0.00	0.00	—	Proxy for Substation

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.08	7.72	0.24	12.4	0.01	0.02	0.45	0.48	0.02	0.12	0.13	135	416,054	416,189	53.1	4.85	2.10	418,965
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	5.99	0.17	1.71	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	135	415,990	416,125	53.1	4.85	0.63	418,899
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49	7.17	0.23	8.98	0.01	0.02	0.45	0.46	0.01	0.11	0.13	135	416,025	416,160	53.1	4.85	1.24	418,935
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.27	1.31	0.04	1.64	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	22.3	68,878	68,900	8.80	0.80	0.21	69,360

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.21	0.18	0.16	1.88	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	491	491	0.02	0.02	1.51	498
Area	1.88	7.54	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	415,449	415,449	39.6	4.80	—	417,870
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	2.08	7.72	0.24	12.4	0.01	0.02	0.45	0.48	0.02	0.12	0.13	135	416,054	416,189	53.1	4.85	2.10	418,965
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.20	0.18	0.17	1.71	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	470	470	0.02	0.02	0.04	477
Area	—	5.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	415,449	415,449	39.6	4.80	—	417,870
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	0.20	5.99	0.17	1.71	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	135	415,990	416,125	53.1	4.85	0.63	418,899
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.20	0.18	0.17	1.76	< 0.005	< 0.005	0.45	0.45	< 0.005	0.11	0.12	—	476	476	0.02	0.02	0.65	483
Area	1.28	6.99	0.06	7.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.7	29.7	< 0.005	< 0.005	—	29.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	415,449	415,449	39.6	4.80	—	417,870
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59

Total	1.49	7.17	0.23	8.98	0.01	0.02	0.45	0.46	0.01	0.11	0.13	135	416,025	416,160	53.1	4.85	1.24	418,935
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.03	0.03	0.32	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	78.8	78.8	< 0.005	< 0.005	0.11	79.9
Area	0.23	1.28	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	68,782	68,782	6.56	0.79	—	69,183
Water	—	—	—	—	—	—	—	—	—	—	—	2.19	11.7	13.9	0.23	0.01	—	21.1
Waste	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	0.27	1.31	0.04	1.64	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	22.3	68,878	68,900	8.80	0.80	0.21	69,360

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.21	0.18	0.16	1.88	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	491	491	0.02	0.02	1.51	498
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.21	0.18	0.16	1.88	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	491	491	0.02	0.02	1.51	498
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	0.20	0.18	0.17	1.71	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	470	470	0.02	0.02	0.04	477
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.20	0.18	0.17	1.71	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	470	470	0.02	0.02	0.04	477
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.04	0.03	0.03	0.32	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	78.8	78.8	< 0.005	< 0.005	0.11	79.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.04	0.03	0.03	0.32	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	78.8	78.8	< 0.005	< 0.005	0.11	79.9

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	415,427	415,427	39.6	4.80	—	417,847
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	22.1	22.1	< 0.005	< 0.005	—	22.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	415,449	415,449	39.6	4.80	—	417,870
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	415,427	415,427	39.6	4.80	—	417,847
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	22.1	22.1	< 0.005	< 0.005	—	22.3
Total	—	—	—	—	—	—	—	—	—	—	—	—	415,449	415,449	39.6	4.80	—	417,870
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	68,779	68,779	6.56	0.79	—	69,179
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	3.67	3.67	< 0.005	< 0.005	—	3.69
Total	—	—	—	—	—	—	—	—	—	—	—	—	68,782	68,782	6.56	0.79	—	69,183

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.88	1.73	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Total	1.88	7.54	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.23	0.22	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93
Total	0.23	1.28	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.2	70.5	83.7	1.36	0.03	—	128
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.19	11.7	13.9	0.23	0.01	—	21.1
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.19	11.7	13.9	0.23	0.01	—	21.1

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	54.0	54.0	54.0	19,710	640	640	640	233,427
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	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	363,600	121,200	1,600

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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	437,991,240	346	0.0330	0.0040	0.00
Parking Lot	23,353	346	0.0330	0.0040	0.00
General Office Building	0.00	346	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	5,840,365	5,165,115
Parking Lot	0.00	0.00
General Office Building	1,051,200	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	203	—

Parking Lot	0.00	—
General Office Building	22.3	—

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
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	16.2	annual days of extreme heat

Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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	2	0	0	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	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	65.7
AQ-PM	83.4
AQ-DPM	56.8
Drinking Water	85.4
Lead Risk Housing	89.3
Pesticides	36.2

Toxic Releases	81.8
Traffic	97.9
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	0.00
Haz Waste Facilities/Generators	60.2
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	17.4
Cardio-vascular	7.94
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	66.5
Housing	54.1
Linguistic	71.2
Poverty	43.7
Unemployment	77.1

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	40.31823431
Employed	23.22597203
Median HI	54.35647376
Education	—

Bachelor's or higher	44.23200308
High school enrollment	100
Preschool enrollment	79.96920313
Transportation	—
Auto Access	45.25856538
Active commuting	40.56204286
Social	—
2-parent households	45.09174901
Voting	70.05004491
Neighborhood	—
Alcohol availability	52.77813422
Park access	37.2770435
Retail density	8.045682022
Supermarket access	42.53817529
Tree canopy	87.74541255
Housing	—
Homeownership	63.76235083
Housing habitability	42.25587065
Low-inc homeowner severe housing cost burden	26.4724753
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	23.82907738
Health Outcomes	—
Insured adults	56.08879764
Arthritis	0.0
Asthma ER Admissions	88.3
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	63.8
Cognitively Disabled	64.4
Physically Disabled	73.0
Heart Attack ER Admissions	94.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
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	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	16.2
English Speaking	17.4
Foreign-born	85.5
Outdoor Workers	54.7
Climate Change Adaptive Capacity	—

Impervious Surface Cover	40.4
Traffic Density	96.5
Traffic Access	23.0
Other Indices	—
Hardship	65.0
Other Decision Support	—
2016 Voting	32.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	48.0
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: Vehicle Data	Changes according to Project Trip Rate
Operations: Energy Use	Values provided by client.
Operations: Water and Waste Water	Values provided by client.

Saturn Data Center Project - Operations 2035 Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Saturn Data Center Project - Operations 2035
Operational Year	2035
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	1977 Saturn St, Monterey Park, CA 91755, USA
County	Los Angeles-South Coast
City	Monterey Park
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4170
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	218	1000sqft	5.01	218,400	113,291	0.00	—	—

Parking Lot	68.0	Space	0.61	0.00	0.00	0.00	—	—
General Office Building	24.0	1000sqft	0.55	24,000	0.00	0.00	—	Proxy for Substation

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.04	7.68	0.20	12.0	< 0.005	0.02	0.45	0.47	0.02	0.12	0.13	135	313,489	313,623	53.1	4.85	1.10	316,397
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.16	5.95	0.12	1.35	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	135	313,427	313,562	53.1	4.85	0.60	316,335
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.44	7.14	0.18	8.61	< 0.005	0.01	0.45	0.46	0.01	0.11	0.13	135	313,462	313,596	53.1	4.85	0.81	316,370
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	1.30	0.03	1.57	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	22.3	51,897	51,919	8.80	0.80	0.13	52,379

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	0.11	1.49	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	436	436	0.02	0.02	0.51	441
Area	1.88	7.54	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312,956	312,956	39.6	4.80	—	315,377
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	2.04	7.68	0.20	12.0	< 0.005	0.02	0.45	0.47	0.02	0.12	0.13	135	313,489	313,623	53.1	4.85	1.10	316,397
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	0.12	1.35	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	418	418	0.02	0.02	0.01	423
Area	—	5.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312,956	312,956	39.6	4.80	—	315,377
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	0.16	5.95	0.12	1.35	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	135	313,427	313,562	53.1	4.85	0.60	316,335
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	0.12	1.39	< 0.005	< 0.005	0.45	0.45	< 0.005	0.11	0.12	—	423	423	0.02	0.02	0.22	428
Area	1.29	6.99	0.06	7.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.7	29.7	< 0.005	< 0.005	—	29.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	312,956	312,956	39.6	4.80	—	315,377
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59

Total	1.44	7.14	0.18	8.61	< 0.005	0.01	0.45	0.46	0.01	0.11	0.13	135	313,462	313,596	53.1	4.85	0.81	316,370
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.02	0.25	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	70.0	70.0	< 0.005	< 0.005	0.04	70.9
Area	0.23	1.28	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	51,813	51,813	6.56	0.79	—	52,214
Water	—	—	—	—	—	—	—	—	—	—	—	2.19	8.79	11.0	0.23	0.01	—	18.2
Waste	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	0.26	1.30	0.03	1.57	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	22.3	51,897	51,919	8.80	0.80	0.13	52,379

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.16	0.14	0.11	1.49	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	436	436	0.02	0.02	0.51	441
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.14	0.11	1.49	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	436	436	0.02	0.02	0.51	441
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	0.16	0.14	0.12	1.35	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	418	418	0.02	0.02	0.01	423
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.14	0.12	1.35	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	418	418	0.02	0.02	0.01	423
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.03	0.03	0.02	0.25	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	70.0	70.0	< 0.005	< 0.005	0.04	70.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.03	0.03	0.02	0.25	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	70.0	70.0	< 0.005	< 0.005	0.04	70.9

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	312,939	312,939	39.6	4.80	—	315,360
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	16.7	16.7	< 0.005	< 0.005	—	16.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	312,956	312,956	39.6	4.80	—	315,377
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	312,939	312,939	39.6	4.80	—	315,360
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	16.7	16.7	< 0.005	< 0.005	—	16.8
Total	—	—	—	—	—	—	—	—	—	—	—	—	312,956	312,956	39.6	4.80	—	315,377
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	51,811	51,811	6.56	0.79	—	52,211
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2.76	2.76	< 0.005	< 0.005	—	2.78
Total	—	—	—	—	—	—	—	—	—	—	—	—	51,813	51,813	6.56	0.79	—	52,214

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.88	1.73	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Total	1.88	7.54	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.23	0.22	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93
Total	0.23	1.28	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.2	53.1	66.3	1.36	0.03	—	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.19	8.79	11.0	0.23	0.01	—	18.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.19	8.79	11.0	0.23	0.01	—	18.2

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	54.0	54.0	54.0	19,710	640	640	640	233,427
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	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	363,600	121,200	1,600

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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	437,991,240	261	0.0330	0.0040	0.00
Parking Lot	23,353	261	0.0330	0.0040	0.00
General Office Building	0.00	261	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	5,840,365	5,165,115
Parking Lot	0.00	0.00
General Office Building	1,051,200	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	203	—

Parking Lot	0.00	—
General Office Building	22.3	—

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
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	16.2	annual days of extreme heat

Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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	2	0	0	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	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	65.7
AQ-PM	83.4
AQ-DPM	56.8
Drinking Water	85.4
Lead Risk Housing	89.3
Pesticides	36.2

Toxic Releases	81.8
Traffic	97.9
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	0.00
Haz Waste Facilities/Generators	60.2
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	17.4
Cardio-vascular	7.94
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	66.5
Housing	54.1
Linguistic	71.2
Poverty	43.7
Unemployment	77.1

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	40.31823431
Employed	23.22597203
Median HI	54.35647376
Education	—

Bachelor's or higher	44.23200308
High school enrollment	100
Preschool enrollment	79.96920313
Transportation	—
Auto Access	45.25856538
Active commuting	40.56204286
Social	—
2-parent households	45.09174901
Voting	70.05004491
Neighborhood	—
Alcohol availability	52.77813422
Park access	37.2770435
Retail density	8.045682022
Supermarket access	42.53817529
Tree canopy	87.74541255
Housing	—
Homeownership	63.76235083
Housing habitability	42.25587065
Low-inc homeowner severe housing cost burden	26.4724753
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	23.82907738
Health Outcomes	—
Insured adults	56.08879764
Arthritis	0.0
Asthma ER Admissions	88.3
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	63.8
Cognitively Disabled	64.4
Physically Disabled	73.0
Heart Attack ER Admissions	94.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
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	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	16.2
English Speaking	17.4
Foreign-born	85.5
Outdoor Workers	54.7
Climate Change Adaptive Capacity	—

Impervious Surface Cover	40.4
Traffic Density	96.5
Traffic Access	23.0
Other Indices	—
Hardship	65.0
Other Decision Support	—
2016 Voting	32.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	48.0
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: Vehicle Data	Changes according to Project Trip Rate
Operations: Energy Use	Values provided by client.
Operations: Water and Waste Water	Values provided by client.

Saturn Data Center Project - Operations 2045 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Saturn Data Center Project - Operations 2045
Operational Year	2045
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50
Precipitation (days)	18.2
Location	1977 Saturn St, Monterey Park, CA 91755, USA
County	Los Angeles-South Coast
City	Monterey Park
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4170
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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	218	1000sqft	5.01	218,400	113,291	0.00	—	—

Parking Lot	68.0	Space	0.61	0.00	0.00	0.00	—	—
General Office Building	24.0	1000sqft	0.55	24,000	0.00	0.00	—	Proxy for Substation

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.02	7.67	0.18	11.9	< 0.005	0.02	0.45	0.47	0.02	0.12	0.13	135	454	588	13.5	0.05	0.70	941
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	5.93	0.10	1.23	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	135	393	528	13.5	0.05	0.59	880
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.43	7.12	0.16	8.49	< 0.005	0.01	0.45	0.46	0.01	0.11	0.13	135	427	562	13.5	0.05	0.64	915
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	1.30	0.03	1.55	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	22.3	70.8	93.1	2.24	0.01	0.11	151

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.14	0.13	0.09	1.36	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	410	410	0.01	0.01	0.11	415
Area	1.88	7.54	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	2.02	7.67	0.18	11.9	< 0.005	0.02	0.45	0.47	0.02	0.12	0.13	135	454	588	13.5	0.05	0.70	941
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.14	0.13	0.10	1.23	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	393	393	0.01	0.01	< 0.005	398
Area	—	5.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	0.14	5.93	0.10	1.23	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	135	393	528	13.5	0.05	0.59	880
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.14	0.13	0.10	1.27	< 0.005	< 0.005	0.45	0.45	< 0.005	0.11	0.12	—	398	398	0.01	0.01	0.05	402
Area	1.29	6.99	0.06	7.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.7	29.7	< 0.005	< 0.005	—	29.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Waste	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59

Total	1.43	7.12	0.16	8.49	< 0.005	0.01	0.45	0.46	0.01	0.11	0.13	135	427	562	13.5	0.05	0.64	915
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.02	0.02	0.23	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.01	66.6
Area	0.23	1.28	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	2.19	0.00	2.19	0.22	0.01	—	9.38
Waste	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	0.26	1.30	0.03	1.55	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	22.3	70.8	93.1	2.24	0.01	0.11	151

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.14	0.13	0.09	1.36	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	410	410	0.01	0.01	0.11	415
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.14	0.13	0.09	1.36	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	410	410	0.01	0.01	0.11	415
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	0.14	0.13	0.10	1.23	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	393	393	0.01	0.01	< 0.005	398
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.14	0.13	0.10	1.23	< 0.005	< 0.005	0.45	0.46	< 0.005	0.12	0.12	—	393	393	0.01	0.01	< 0.005	398
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.03	0.02	0.02	0.23	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.01	66.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.03	0.02	0.02	0.23	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	65.9	65.9	< 0.005	< 0.005	0.01	66.6

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.88	1.73	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Total	1.88	7.54	0.09	10.5	< 0.005	0.02	—	0.02	0.01	—	0.01	—	43.4	43.4	< 0.005	< 0.005	—	43.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	—	5.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	5.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consum er Products	—	0.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	0.23	0.22	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93
Total	0.23	1.28	0.01	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.92	4.92	< 0.005	< 0.005	—	4.93

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.2	0.00	13.2	1.35	0.03	—	56.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.19	0.00	2.19	0.22	0.01	—	9.38
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.19	0.00	2.19	0.22	0.01	—	9.38

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	121	0.00	121	12.1	0.00	—	425
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.1	0.00	20.1	2.01	0.00	—	70.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.10	0.10

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	54.0	54.0	54.0	19,710	640	640	640	233,427
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	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	363,600	121,200	1,600

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

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	437,991,240	0.00	0.0000	0.0000	0.00
Parking Lot	23,353	0.00	0.0000	0.0000	0.00
General Office Building	0.00	0.00	0.0000	0.0000	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	5,840,365	5,165,115
Parking Lot	0.00	0.00
General Office Building	1,051,200	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	203	—

Parking Lot	0.00	—
General Office Building	22.3	—

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
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	16.2	annual days of extreme heat

Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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	2	0	0	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	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	65.7
AQ-PM	83.4
AQ-DPM	56.8
Drinking Water	85.4
Lead Risk Housing	89.3
Pesticides	36.2

Toxic Releases	81.8
Traffic	97.9
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	0.00
Haz Waste Facilities/Generators	60.2
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	17.4
Cardio-vascular	7.94
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	66.5
Housing	54.1
Linguistic	71.2
Poverty	43.7
Unemployment	77.1

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	40.31823431
Employed	23.22597203
Median HI	54.35647376
Education	—

Bachelor's or higher	44.23200308
High school enrollment	100
Preschool enrollment	79.96920313
Transportation	—
Auto Access	45.25856538
Active commuting	40.56204286
Social	—
2-parent households	45.09174901
Voting	70.05004491
Neighborhood	—
Alcohol availability	52.77813422
Park access	37.2770435
Retail density	8.045682022
Supermarket access	42.53817529
Tree canopy	87.74541255
Housing	—
Homeownership	63.76235083
Housing habitability	42.25587065
Low-inc homeowner severe housing cost burden	26.4724753
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	23.82907738
Health Outcomes	—
Insured adults	56.08879764
Arthritis	0.0
Asthma ER Admissions	88.3
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	63.8
Cognitively Disabled	64.4
Physically Disabled	73.0
Heart Attack ER Admissions	94.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
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	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	16.2
English Speaking	17.4
Foreign-born	85.5
Outdoor Workers	54.7
Climate Change Adaptive Capacity	—

Impervious Surface Cover	40.4
Traffic Density	96.5
Traffic Access	23.0
Other Indices	—
Hardship	65.0
Other Decision Support	—
2016 Voting	32.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	48.0
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: Vehicle Data	Changes according to Project Trip Rate
Operations: Energy Use	Values provided by client.
Operations: Water and Waste Water	Values provided by client.
Characteristics: Utility Information	Carbon neutrality by 2045 per SB 100

Phase 1 Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Phase 2 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
Phase 1 Demolition	—	—	—	—
Phase 1 Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1 Demolition	Vendor	—	10.2	HHDT,MHDT
Phase 1 Demolition	Hauling	56.1	20.0	HHDT
Phase 1 Demolition	Onsite truck	—	—	HHDT
Phase 1 Site Preparation	—	—	—	—
Phase 1 Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Phase 1 Site Preparation	Vendor	—	10.2	HHDT,MHDT
Phase 1 Site Preparation	Hauling	0.00	20.0	HHDT
Phase 1 Site Preparation	Onsite truck	—	—	HHDT
Phase 1 Building Construction and Utilities	—	—	—	—
Phase 1 Building Construction and Utilities	Worker	77.6	18.5	LDA,LDT1,LDT2
Phase 1 Building Construction and Utilities	Vendor	39.7	10.2	HHDT,MHDT
Phase 1 Building Construction and Utilities	Hauling	0.00	20.0	HHDT
Phase 1 Building Construction and Utilities	Onsite truck	—	—	HHDT
Phase 2 Interior Construction	—	—	—	—
Phase 2 Interior Construction	Worker	77.6	18.5	LDA,LDT1,LDT2

Phase 2 Interior Construction	Vendor	39.7	10.2	HHDT,MHDT
Phase 2 Interior Construction	Hauling	0.00	20.0	HHDT
Phase 2 Interior Construction	Onsite truck	—	—	HHDT
Phase 1 Paving	—	—	—	—
Phase 1 Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1 Paving	Vendor	—	10.2	HHDT,MHDT
Phase 1 Paving	Hauling	0.00	20.0	HHDT
Phase 1 Paving	Onsite truck	—	—	HHDT
Phase 1 Grading	—	—	—	—
Phase 1 Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Phase 1 Grading	Vendor	—	10.2	HHDT,MHDT
Phase 1 Grading	Hauling	406	20.0	HHDT
Phase 1 Grading	Onsite truck	—	—	HHDT
Phase 2 Architectural Coating	—	—	—	—
Phase 2 Architectural Coating	Worker	31.0	18.5	LDA,LDT1,LDT2
Phase 2 Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Phase 2 Architectural Coating	Hauling	0.00	20.0	HHDT
Phase 2 Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

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)
Phase 2 Architectural Coating	0.00	0.00	363,600	121,200	1,600

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Phase 1 Demolition	0.00	0.00	0.00	9,871	—
Phase 1 Site Preparation	0.00	0.00	36.0	0.00	—
Phase 1 Grading	0.00	65,000	20.0	0.00	—
Phase 1 Paving	0.00	0.00	0.00	0.00	0.61

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Parking Lot	0.61	100%
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005

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	16.2	annual days of extreme heat
Extreme Precipitation	5.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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	2	0	0	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	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	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	2	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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	65.7
AQ-PM	83.4
AQ-DPM	56.8
Drinking Water	85.4
Lead Risk Housing	89.3

Pesticides	36.2
Toxic Releases	81.8
Traffic	97.9
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	0.00
Haz Waste Facilities/Generators	60.2
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	17.4
Cardio-vascular	7.94
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	66.5
Housing	54.1
Linguistic	71.2
Poverty	43.7
Unemployment	77.1

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	40.31823431
Employed	23.22597203
Median HI	54.35647376

Education	—
Bachelor's or higher	44.23200308
High school enrollment	100
Preschool enrollment	79.96920313
Transportation	—
Auto Access	45.25856538
Active commuting	40.56204286
Social	—
2-parent households	45.09174901
Voting	70.05004491
Neighborhood	—
Alcohol availability	52.77813422
Park access	37.2770435
Retail density	8.045682022
Supermarket access	42.53817529
Tree canopy	87.74541255
Housing	—
Homeownership	63.76235083
Housing habitability	42.25587065
Low-inc homeowner severe housing cost burden	26.4724753
Low-inc renter severe housing cost burden	54.20248941
Uncrowded housing	23.82907738
Health Outcomes	—
Insured adults	56.08879764
Arthritis	0.0
Asthma ER Admissions	88.3
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	63.8
Cognitively Disabled	64.4
Physically Disabled	73.0
Heart Attack ER Admissions	94.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
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	0.0
SLR Inundation Area	0.0
Children	31.0
Elderly	16.2
English Speaking	17.4
Foreign-born	85.5
Outdoor Workers	54.7

Climate Change Adaptive Capacity	—
Impervious Surface Cover	40.4
Traffic Density	96.5
Traffic Access	23.0
Other Indices	—
Hardship	65.0
Other Decision Support	—
2016 Voting	32.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	48.0
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
Land Use	Square footage according to project description.
Construction: Construction Phases	Changes according to client's project construction schedule
Construction: Off-Road Equipment	anticipated construction equipment based on assumptions