ENTECH CONSULTING GROUP
PLANNING • ENVIRONMENTAL • CONSTRUCTION MANAGEMENT

December 29, 2025

Travis Heaps
Principal Planner
West Coast Entitlement
543 W. County Line Road
Calimesa, CA 92320

Subject: Sartin Storage Yard – CEQA Energy Review
City of Calimesa, CA

Dear Mr. Heaps:

Entech Consulting Group has completed a CEQA energy review for the proposed Sartin Storage Yard located in the City of Calimesa, Riverside County, California. The approximately 2.46-acre project site is proposed to be developed with a paved storage yard.

1.0 Existing Energy Conditions

Overview

California's estimated annual energy use as of 2023 included:

- Approximately 281,140 gigawatt hours of electricity; [1]
- Approximately 2,087,461 million cubic feet of natural gas per year[2];and
- Approximately 15.2 billion gallons of transportation fuel (for the year 2018)[3].

As of 2022, the year of most recent data currently available by the United States Energy Information Administration (EIA), energy use in California by demand sector was:

- Approximately 42.6 percent transportation;
- Approximately 22.5 percent industrial;
- Approximately 17.6 percent residential; and
- Approximately 17.4 percent commercial.[4]

California's electricity in-state generation system generates approximately 215,623 gigawatt-hours each year. In 2023, California produced approximately 77 percent of the electricity it uses; the rest was imported from the Pacific Northwest (approximately 5.7 percent) and the U.S. Southwest (approximately 18 percent). Non-GHG and renewable resources were the main source for electricity generation at approximately 56.09 percent of the total in-state electric generation system power as shown in Table 1.

[1]California Energy Commission. Energy Almanac. Total Electric Generation. [Online] 2023. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation.
[2]Natural Gas Consumption by End Use. U.S. Energy Information Administration. [Online] January 31, 2025. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm.
[3]California Energy Commission. Revised Transportation Energy Demand Forecast 2018-2030. [Online] April 19, 2018. https://www.energy.ca.gov/assessments/
[4]U.S. Energy Information Administration. California Energy Consumption by End-Use Sector. California State Profile and Energy Estimates. [Online] January 16, 2020 https://www.eia.gov/state/?sid=CA#tabs-2

Table 1: Total Electricity System Power (California 2023)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	California Power Mix (GWh)	Percent California Power Mix
Coal	257	0.12%	163	4,561	4,724	7.2%	4,981	1.77%
Natural Gas	94,162	46.68%	52	8,530	8,582	13.1%	102,774	35.56%
Nuclear	17,714	8.22%	196	8,361	8,558	13.1%	26,272	11.70%
Oil	36	0.02%	0	0	0	0.0%	36	0.01%
Other (Petroleum Coke/Waste Heat)	206	0.10%	0	0	0	0.0%	206	0.07%
Large Hydro	27066	12.55%	4,712	1,109	5821	8.9%	32886	11.70%
Unspecified Sources of Power	-	0.00%	100	10,273	10,373	15.8%	10,373	3.69%
Renewables	120,932	56.09%	15,609	26,229	41,838	63.9%	162,771	57.90%
Biomass	5,037	2.34%	753	-	753	1.1%	5,790	2.06%
Geothermal	10,999	5.10%	221	2,347	2,569	3.9%	13,567	4.83%
Somall Hydro	4,853	2.25%	133	2	135	0.2%	4,988	1.77%
Solar	41,344	19.17%	417	6,108	6,525	10.0%	47,869	17.03%
Wind	13,920	6.46%	9,177	8,302	17,479	26.7%	31,399	11.17%
Total	215,623	100.00%	15,925	49,593	65,518	100.0%	281,140	100.00%

Notes:
[1] Source: California Energy Commission. 2023 Total System electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation

A summary of and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2023 and ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and second largest consumer of motor gasoline in 2023.
- California's total energy consumption is the second highest in the nation, but, in 2023, the State's per capita energy consumption ranked the fourth-lowest, due in part to its mild climate and its energy efficiency programs.
- In 2023, renewable resources, including hydroelectric power and small-scale solar power, supplied 54% of California's in-state electricity generation. Natural gas fueled another 39% and nuclear power provided almost all the rest.
- In 2023, California was the fourth-largest electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports more electricity than any other state[5].

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient. Given the nature of the proposed project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—

[5] State Profile and Energy Estimates. Independent Statistics and Analysis. [Online] [Cited: May 16, 2024.] http://www.eia.gov/state/?sid=CA#tabs2.

namely, electricity and natural gas for building uses, and transportation fuel for vehicle trips associated with the proposed project.

Electricity

Electricity would be provided to the project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons, within a service area encompassing approximately 50,000 square miles.[6] SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.[7] Table 2 identifies SCE's specific proportional shares of electricity sources in 2022.

Table 2
SCE 2022 Power Content Mix

Energy Resources	2022 SCE Power Mix
Eligible Renewable[1]	33.2%
Biomass & Biowaste	0.1%
Geothermal	5.7%
Eligible Hydroelectric	0.5%
Solar	17.0%
Wind	9.8%
Coal	0.0%
Large Hydroelectric	3.4%
Natural Gas	24.7%
Nuclear	8.3%
Other	0.1%
Unspecified Sources of power[2]	30.3%
Total	100.0%

Notes:
Source: https://www.sce.com/sites/default/files/custom-files/PDF_Files/SCE_2022_Power_Content_Label_B%26W.pdf.
(1) The eligible renewable percentage above does not reflect RPS compliance, which is determined using a different methodology.
(2) Unspecified sources of power means electricity from transactions that are not traceable to specific generation sources.

During construction, electricity would be required to power equipment including lights, power tools, and temporary site buildings.

Natural Gas

Natural gas would be provided to the project by Southern California Gas (SoCalGas). The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC).

[6] https://www.sce.com/about-us/who-we-are/leadership/our-service-territory
[7] California Energy Commission. Utility Energy Supply plans from 2015. https://www.energy.ca.gov/almanac/electricity_data/supply_forms.html

The CPUC regulates natural gas utility service for approximately 11 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller investor-owned natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing.

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2017, for example, California utility customers received 38% of their natural gas supply from basins located in the U.S. Southwest, 27% from Canada, 27% from the U.S. Rocky Mountain area, and 8% from production located in California."[8]

During construction, natural gas use may be required for onsite heating or any drying/curing processes.

Transportation Energy Resources

The project would attract additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. Gasoline (and other vehicle fuels) are commercially-provided commodities and would be available to the project patrons and employees via commercial outlets.

The most recent data available shows the transportation sector emits 39 percent of the total greenhouse gases in the state and about 84 percent of smog-forming oxides of nitrogen (NOx).[9,10] About 27 percent of total United States energy consumption in 2022 was for transporting people and goods from one place to another. In 2022, petroleum comprised about 90 percent of all transportation energy use, excluding fuel consumed for aviation and most marine vessels.[11] In 2023, U.S. finished motor gasoline consumption averaged about 8.94 million barrels per day or about 376 million gallons per day.[12]

Gasoline and diesel fuel would be required during construction for worker, vendor, and hauling trips to and from the site as well as fuel to operate construction equipment and generators.

[8]California Public Utilities Commission. Natural Gas and California. http://www.cpuc.ca.gov/natural_gas/
[9]CARB. California Greenhouse Gas Emissions Inventory 2000-2020 – 2022 Edition. https://ww2.arb.ca.gov/ghg-inventory-data
[10]CARB. 2016 SIP Emission Projection Data. https://www.arb.ca.gov/app/emsinv/2017/emseic1_query.php?F_DIV=-4&F_YR=2012&F_SEASON=A&SP=SIP105ADJ&F_AREA=CA
[11] US Energy Information Administration. Use of Energy in the United States Explained: Energy Use for Transportation. https://www.eia.gov/energyexplained/?page=us_energy_transportation
[12] https://www.eia.gov/tools/faqs/faq.php?id=23&t=10

2.0 Regulatory Background

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

Federal Regulations

Corporate Average Fuel Economy (CAFE) Standards

First established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.[13]

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the CAFE and CO2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO2 standards for model year 2020 are 43.7 mpg and 204 grams of CO2 per mile for passenger cars and 31.3 mpg and 284 grams of CO2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012.[14]

Intermodal Surface transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

The Transportation Equity Act of the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure

[13] https://www.nhtsa.gov/lawsregulations/corporate-average-fuel-economy.
[14] National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-final-rule.

established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State Regulations

Integrated Energy Policy Report (IEPR)

Senate Bill 1389 requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 Integrated Energy Policy Report (2019 IEPR) was adopted February 20, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.[15]

The 2020 IEPR was adopted March 23, 2021 and identifies actions the state and others can take to ensure a clean. Affordable, and reliable energy system. In 2020, the IEPR focuses on California's transportation future and the transition to zero-emission vehicles, examines microgrids, lessons learned form a decade of state-supported research, and stakeholder feedback on the potential of microgrids to contribute to a lean and resilient energy system; and reports on California's energy demand outlook, updated to reflect the global pandemic and help plan for a growth in zero-emission plug in electric vehicles.[16]

The 2021 IEPR was adopted February 16, 2022, and covers topics including building decarbonization, energy efficiency, challenges with decarbonizing California's gas system, quantifying the benefits of the Clean Transportation Program, and the California Energy Demand Forecast.[17]

The 2022 IEPR was adopted February 28, 2023, and focused on embedding equity and environmental justice at the CEC, the California Energy Planning Library, the California energy demand forecast, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition, and distributed energy resources.

[15] California Energy Commission. Final 2019 Integrated Energy Policy Report. February 20, 2020. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report

[16] California Energy Commission. Final 2020 Integrated Energy Policy Report. March 23, 2020. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2020-integrated-energy-policy-report-update

[17] California Energy Commission. Final 2021 Integrated Energy Policy Report. February 16, 2022. https://www.energy.ca.gov/publications/2021/2021-integrated-energy-policy-report#:~:text=In%20addition%20to%20these%20events,the%20California%20Energy%20Demand%20Forecast.

The 2023 IEPR, the most recent approved IEPR, was adopted February 14, 2024, and covers topics including accelerated connection of clean energy, California energy demand forecast, potential growth of hydrogen in California, and updates on key issues including: gas system decarbonization, benefits of the clean transportation, and program energy efficiency.

The 2024 and 2025 editions of the IEPR are currently in progress.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California Building Standards Code (Title 24)

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020. The 2019 Title 24 standards include efficiency improvements to the lighting and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers.

All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. The 2016 residential standards were estimated to be approximately 28 percent more efficient than the 2013 standards, whereas the 2019 residential standards are estimated to be approximately 7 percent more efficient than the 2016 standards. Furthermore, once rooftop solar electricity generation is factored in, 2019 residential standards are estimated to be approximately 53 percent more efficient than the 2016 standards. Under the 2019 standards, nonresidential buildings are estimated to be approximately 30 percent more efficient than the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Building Energy Efficiency Standards (Title 24, Part 11)

The 2022 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2023. The 2023 CALGreen Code includes mandatory measures for non-residential development related to site development; energy

efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.

The CEC estimates that over 30 years the 2022 Energy Code will provide $1.5 billion in consumer benefits and reduce 10 million metric tons of GHG. Changes compared to the 2019 Energy Code include increases to on-site renewable energy generation from solar, increases to electric load flexibility to support grid reliability, reduction of emissions from newly constructed buildings, reduction of air pollution for improved public health, and increased adoption of environmentally beneficial efficient electric technologies.

The 2025 Title 24 regulations are currently in progress and may be required to be followed depending on the final opening date of the project.

Senate Bill 100

Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 350

Senate Bill 350 (SB 350) was signed into law October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure these goals are met and the greenhouse gas emission reductions are realized, large utilities will be required to develop and submit Integrated Resource Plans (IRPs). These IRPs will detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions and ramp up the deployment of clean energy resources.

Assembly Bill 32

In 2006 the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects

that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

Assembly Bill 1493/Pavley Regulations

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-1-07/Low Carbon Fuel Standard

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also

may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Executive Order N-79-20/Zero Emissions by 2035 Standard

Executive Order N-79-20 was issued in January 2021 and proposes a goal of the State that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. Furthermore, it proposes a goal of the State that 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks, as well as to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

California Air Resources Board

CARB's Advanced Clean Cars Program

Closely associated with the Pavley regulations, the Advanced Clean Cars emissions control program was approved by CARB in 2012. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles for model years 2015–2025. The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[18]

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, California Code of Regulations, Division 3, Chapter 10, Section 2435) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This section applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuel used by the vehicle.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and other Criteria Pollutants, form In-Use Heavy-Duty Diesel-Fueled Vehicles

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (Title 13, California Code of Regulations, Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NO_X) and other criteria pollutants from in-use diesel-fueled vehicles. This regulation is phased, with full implementation by 2023. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer

[18] California Air Resources Board, California's Advanced Clean Cars Program, January 18, 2017. www.arb.ca.gov/msprog/acc/acc.htm.

emission-controlled models. The newer emission controlled models would use petroleum-based fuel in a more efficient manner.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375 (SB 375), coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32.

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. As of 2018, the 2020 and 2035 targets were set at 15 percent and 19 percent, respectively. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

3.0 Evaluation Criteria and Methodology

Evaluation Criteria

CEQA Energy Questions

In compliance with Appendix G of the State CEQA Guidelines, this report analyzes the project's anticipated energy use to determine if the project would:

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

In addition, Appendix F of the State CEQA Guidelines states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

Appendix F of the State CEQA guidelines also states that the environmental impacts from a project can include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Methodology

Information from the CalEEMod 2022.1.1.29 Outputs was utilized for this analysis and is provided in Appendix A. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands.

4.0 Energy Review

Construction Energy Demand

The construction schedule is anticipated to begin no earlier than August 2024 be completed in one phase completing in September 2024.[19] Staging of construction vehicles and equipment will occur on-site.

Construction Equipment Electricity Usage Estimates

Electrical service will be provided by Southern California Edison (SCE). Based on the 2017 National Construction Estimator, Richard Pray (2017)[20], the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. The Project plans to develop the site with 107,415 square feet of storage yard space over the course of approximately two months. Based on Table 3, the total power cost of the on-site electricity usage during the construction of the proposed Project is estimated to be approximately $249. As shown in Table 3, the total electricity usage from Project construction related activities is estimated to be approximately 4,531 kWh.[21]

<Table 3 on next page>

[19] The estimated construction timeline was generated based a two-month construction timeline beginning May 2025.
[20] Pray, Richard. 2017 National Construction Estimator. Carlsbad: Craftsman Book Company, 2017.
[21] LADWP's Small Commercial & Multi-Family Service (A-1) is approximately $0.06 per kWh of electricity Southern California Edison (SCE). Rates & Pricing Choices: General Service/Industrial Rates. https://library.sce.com/content/dam/sce-doclib/public/regulatory/historical/electric/2020/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1_2020.pdf

Table 3: Project Construction Power Cost and Electricity Usage

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot)	Construction Duration (months)	Total Project Construction Power Cost
$2.32	107.415	2	$498.41

Cost per kWh	Total Project Construction Electricity Usage (kWh)
$0.24	9,062

* Assumes the Project will be under the GS-1 General Service rate under SCE.

Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of project construction. Fuel consumed by construction equipment was evaluated with the following assumptions:

- Construction schedule of approximately 1 month
- All construction equipment was assumed to run on diesel fuel
- Typical daily use of 8 hours, with some equipment operating from ~6-7 hours
- Aggregate fuel consumption rate for all equipment was estimated at 18.5 bhp-hr/gal (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: (https://ww2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017_cmpgl.pdf).
- Diesel fuel would be the responsibility of the equipment operators/contractors and would be sources within the region.
- Project construction represents a "single-event" for diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources during long term operation.

Using the CalEEMod data input in Appendix A, the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 bhp-hr/gal. Table 4 shows the results of the analysis of construction equipment.

<*Table 4 on next page*>

Table 4: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/day	Total Fuel Consumption (gal diesel fuel)[1,2]
Site Preparation	6	Graders	1	8	148	0.41	485	157
	6	Scrapers	1	8	423	0.48	1,624	527
	6	Tractors/Loaders/Backhoes	1	7	84	0.37	218	71
Grading	8	Graders	1	8	148	0.41	485	210
	8	Rubber Tired Dozers	1	8	367	0.4	1,174	508
	8	Tractors/Loaders/Backhoes	2	7	84	0.37	435	188
Paving	11	Cement and Mortar Mixers	1	8	10	0.56	45	27
	11	Pavers	1	8	81	0.42	272	162
	11	Paving Equipment	1	8	89	0.36	256	152
	11	Rollers	1	8	36	0.38	109	65
	11	Tractors/Loaders/Backhoes	1	7	46	0.37	119	71
Architectural Coating	10	Air Compressors	1	6	37	0.48	107	58
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								**2,195**

Notes:
[1]Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.
(Source: https://ww2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017_cmpgl.pdf)
[2]Totals may not add up precisely to rounding.

As presented in Table 4, project construction activities would consume an estimated 2,195 gallons of diesel fuel. As stated previously, project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

It is assumed that construction equipment would remain onsite for the duration of each phase and would not be required to be removed from the site any additional times.

Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 5,041 VMT. Data regarding project related construction worker trips were based on CalEEMod 2022.1.1.29 model defaults.

Vehicle fuel efficiencies for construction workers were estimated using information generated using CARB's EMFAC model (see Appendix B for details). An aggregate fuel efficiency of 30.95 miles per gallon (mpg) was used to calculate vehicle miles traveled for construction worker trips. Table 5 shows that an estimated 156 gallons of fuel would be consumed for construction worker trips.

<Table 5 on next page>

Table 5: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	6	7.5	18.5	833	30.95	27
Grading	8	10	18.5	1,480	31.95	46
Paving	11	12.5	18.5	2,544	32.95	77
Architectural Coating	10	1	18.5	185	30.95	6
Total Construction Worker Fuel Consumption						**156**

Notes:
[1]Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Construction Vendor/Hauling Fuel Estimates

Tables 6 and 7 show the estimated fuel consumption for vendor and hauling. With respect to estimated VMT, hauling trips would generate an estimated 822 VMT. No vendor trips are anticipated. Data regarding project related construction worker trips were based on CalEEMod 2022.1.1.29 model defaults.

For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles. Therefore, vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 8.4 mpg for medium heavy-duty trucks and 6.41 mpg for heavy-duty trucks (see Appendix B for details). Tables 6 and 7 show that an estimated 100 gallons of fuel would be consumed for vendor and hauling trips.

Table 6: Construction Vendor Fuel Consumption Estimates (MHD Trucks)[1]

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	6	0	10.2	0	9.22	0
Grading	8	0	10.2	0	9.22	0
Paving	11	5	10.2	561	9.22	61
Architectural Coating	10	0	10.2	0	9.22	0
Total Construction Vendor Fuel Consumption						**61**

Notes:
[1] Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Table 7: Construction Hauling Fuel Consumption Estimates (HHD Trucks)[1]

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	6	0	20	0	6.74	0
Grading	8	1.63	20	261	6.74	39
Paving	11	0	20	0	6.74	0
Architectural Coating	10	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						**39**

Notes:
[1]Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately two-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. Construction of the proposed industrial development would require the typical use of energy resources. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the project would therefore not result in inefficient, wasteful, or unnecessary consumption of fuel.

CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Additionally, as required by California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby minimizing or eliminating unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints. Compliance with these measures would result in a more efficient use of construction-related energy and would minimize or eliminate wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

In addition to regulatory requirements, construction contractors and equipment operators have strong financial incentives to avoid wasteful fuel consumption because fuel costs represent a substantial portion of construction operating expenses. Minimizing idling, scheduling work efficiently, and using well-maintained equipment reduces unnecessary fuel use and associated costs. These cost-based incentives further reinforce that construction fuel consumption would not be wasteful or inefficient.

Additionally, as the project involves the construction of a storage yard and no building construction, the project would have significantly less energy consumption than the typical industrial construction project.

Construction-related fuel consumption would be temporary (approximately two months) and limited in scale relative to regional construction activity. As demonstrated in the Air Quality analysis, estimated fuel consumption and associated emissions are typical of short-term industrial site preparation and do not represent a substantial demand on regional petroleum supplies. The project would not require specialized or unusually energy-intensive equipment, nor would it conflict with state policies promoting energy efficiency or reduced fuel use. Therefore, construction energy consumption would not be inefficient, wasteful, or unnecessary, and impacts would be less than significant.

Operation Energy Demand

Energy consumption in support of or related to project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

Transportation Fuel Consumption

The largest source of operational energy use would be vehicle operation of customers. The site is located in an urban area. Using the CalEEMod output, it is assumed that an average trip for all vehicles is 13.41 miles per CalEEMod defaults. To show a worst-case analysis, as the proposed Project is an industrial project, it was assumed that vehicles would operate 365 days per year. Trip generation rates and proportion of vehicles by type is based upon the traffic analysis for the project from LSA (2024), which determined the project would generate 49 daily trips, or 343 weekly trips total. The project is assumed to include approximately 5-10 employees on any given day, which are assumed to be coming to the site in a vehicle under the automobile vehicle mix. LSA determined a trip generation rate per truck stall for truck trips. Table 8 shows the worst-case estimated annual fuel consumption for all classes of vehicles from autos to heavy-heavy trucks.[22] Table 8 shows that an estimated 19,156 gallons of fuel would be consumed per year for the operation of the proposed Project.

Table 8: Estimated Vehicle Operations Fuel Consumption

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles)[1]	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)[2]
Light Auto	Automobile	16.1	13.41	216	30.21	7.15	2,611
Light Truck	Automobile	1.7	13.41	22	24.95	0.90	328
Light Truck	Automobile	5.1	13.41	69	24.66	2.80	1,022
Medium Truck	Automobile	4.1	13.41	55	19.93	2.74	999
Light Heavy Truck	2-Axle Truck	2.4	13.41	32	16.29	1.94	710
Light Heavy Truck 10,000 lbs +	2-Axle Truck	0.6	13.41	9	15.46	0.55	202
Medium Heavy Truck	3-Axle Truck	5.0	13.41	67	8.53	7.86	2,868
Heavy Heavy Truck	4-Axle Truck	14.0	13.41	188	6.58	28.54	10,417
Total		49	--	657	--	52.48	**19,156**
Notes:							
[1]Based on the size of the site and relative location, heavy truck trips were assumed to be regional, and all other trips were assumed to be local. [2]Totals may not add up precisely to rounding.							

Trip generation and VMT generated by the proposed project are consistent with other similar industrial uses of similar scale and configuration as reflected respectively in the CalEEMod output. That is, the proposed project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.

Facility Energy Demands (Electricity)

Project operation and site maintenance (including landscape maintenance) would result in the consumption of electricity (provided by SCE). These facilities would comply with all applicable California Energy Efficiency Standards and 2022 CALGreen Standards.

The annual electricity demands were provided per the CalEEMod output in Appendix A and are provided in Table 9.

[22] Average fuel economy based on aggregate mileage calculated in EMFAC 2021 for opening year (2024). See Appendix B for EMFAC output.

Table 9: Project Annual Operational Energy Demand Summary[1]

Electricity Demand	kWh/year
Parking Lot	93,870
Total	93,870

Notes:
[1]Taken from the CalEEMod 2022.1.1.29 annual output.

As shown in Table 9, the estimated electricity demand for the proposed project is approximately 93,870 kWh per year. In 2022, the non-residential sector of the County of Riverside consumed approximately 8,720 million kWh of electricity.[23] Therefore, the increase in electricity demand from the proposed project is insignificant compared to the County's 2022 non-residential sector demand.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. In California, the California Building Standards Code Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Non-building energy use, or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, appliances, etc.).

Furthermore, the proposed project energy demands in total would be comparable to other industrial projects of similar scale and configuration. Therefore, the project facilities' energy demands and energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Renewable Energy and Energy Efficiency Plan Consistency

Plan Consistency

Regarding federal transportation regulations, the project site is located in an already developed area. Access to/from the project site is from existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by SCE.

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, use LED lighting, and install low pollutant-emitting finish materials.

5.0 Conclusions

[23] California Energy Commission, Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx

As supported by the preceding analyses, neither construction nor operation of the Project would result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. The proposed project does not include any unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities and is an industrial project that is not proposing any additional features that would require a larger energy demand than other industrial projects of similar scale and configuration. As the proposed project is consistent with the existing General Plan land use designation, the energy demands of the project are anticipated to be accommodated within the context of available resources and energy delivery systems. The project would therefore not cause or result in the need for additional energy producing or transmission facilities. The project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

The Project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards. These measures include but are not limited to the use of water conserving plumbing, installation of bicycle racks, the use of LED lighting, and water-efficient irrigation systems. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts would be less than significant.

Entech is pleased to provide this CEQA Energy review. If you have any questions regarding this analysis, please don't hesitate to call us at (951) 506-0055.

Sincerely,
Entech Consulting Group



Michelle A. Jones
Principal Engineer

Appendix A
CalEEMod Output

Sartin Storage Yard Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Sartin Storage Yard
Construction Start Date	8/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	25.8
Location	33.98416431717179, -117.05137066104376
County	Riverside-South Coast
City	Calimesa
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5623
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Parking Lot	107	1000sqft	2.46	0.00	16,070	—	—	—

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.11	23.9	17.7	0.08	0.81	9.60	10.4	0.76	4.12	4.88	—	11,460	11,460	0.27	1.42	19.4	11,909
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.91	0.85	< 0.005	0.03	0.24	0.28	0.03	0.09	0.13	—	344	344	0.01	0.03	0.20	354
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.17	0.15	< 0.005	0.01	0.04	0.05	0.01	0.02	0.02	—	56.9	56.9	< 0.005	0.01	0.03	58.6

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.11	23.9	17.7	0.08	0.81	9.60	10.4	0.76	4.12	4.88	—	11,460	11,460	0.27	1.42	19.4	11,909
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.18	0.91	0.85	< 0.005	0.03	0.24	0.28	0.03	0.09	0.13	—	344	344	0.01	0.03	0.20	354
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.03	0.17	0.15	< 0.005	0.01	0.04	0.05	0.01	0.02	0.02	—	56.9	56.9	< 0.005	0.01	0.03	58.6

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.26	2.33	0.01	< 0.005	0.47	0.47	< 0.005	0.12	0.12	0.00	708	708	0.03	0.03	2.31	719
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.24	0.28	1.93	0.01	< 0.005	0.47	0.47	< 0.005	0.12	0.12	0.00	673	673	0.03	0.03	0.06	682
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.28	2.01	0.01	< 0.005	0.46	0.46	< 0.005	0.12	0.12	0.00	678	678	0.03	0.03	1.00	688
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.05	0.37	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	0.00	112	112	0.01	< 0.005	0.16	114

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.26	2.33	0.01	< 0.005	0.47	0.47	< 0.005	0.12	0.12	—	569	569	0.02	0.02	2.31	580
Area	0.02	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	137	137	0.01	< 0.005	—	137
Water	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.25	0.26	2.33	0.01	< 0.005	0.47	0.47	< 0.005	0.12	0.12	0.00	708	708	0.03	0.03	2.31	719
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.22	0.28	1.93	0.01	< 0.005	0.47	0.47	< 0.005	0.12	0.12	—	534	534	0.02	0.03	0.06	543
Area	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	137	137	0.01	< 0.005	—	137
Water	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.24	0.28	1.93	0.01	< 0.005	0.47	0.47	< 0.005	0.12	0.12	0.00	673	673	0.03	0.03	0.06	682
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.22	0.28	2.01	0.01	< 0.005	0.46	0.46	< 0.005	0.12	0.12	—	539	539	0.02	0.03	1.00	549
Area	0.02	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	137	137	0.01	< 0.005	—	137
Water	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.28	2.01	0.01	< 0.005	0.46	0.46	< 0.005	0.12	0.12	0.00	678	678	0.03	0.03	1.00	688
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.05	0.37	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	89.3	89.3	< 0.005	< 0.005	0.16	90.8
Area	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	22.7	22.7	< 0.005	< 0.005	—	22.7
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.33	0.33	< 0.005	< 0.005	—	0.33
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.05	0.37	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	0.00	112	112	0.01	< 0.005	0.16	114

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	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	1.19	10.9	11.0	0.03	0.47	—	0.47	0.43	—	0.43	—	2,717	2,717	0.11	0.02	—	2,726
Dust From Material Movement	—	—	—	—	—	1.59	1.59	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.7	44.7	< 0.005	< 0.005	—	44.8
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.39	7.39	< 0.005	< 0.005	—	7.42

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.58	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.39	107
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.62	1.62	< 0.005	< 0.005	< 0.005	1.64
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.27
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
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

3.3. Grading (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	14.1	14.5	0.02	0.64	—	0.64	0.59	—	0.59	—	2,455	2,455	0.10	0.02	—	2,463
Dust From Material Movement	—	—	—	—	—	7.14	7.14	—	3.43	3.43	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.31	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	53.8	53.8	< 0.005	< 0.005	—	54.0
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.08	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.91	8.91	< 0.005	< 0.005	—	8.94
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.04	0.77	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
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
Hauling	0.14	9.83	2.40	0.06	0.17	2.33	2.50	0.17	0.65	0.82	—	8,864	8,864	0.16	1.40	18.9	9,303
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.88	2.88	< 0.005	< 0.005	< 0.005	2.92
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
Hauling	< 0.005	0.23	0.05	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	194	194	< 0.005	0.03	0.18	204
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.48	0.48	< 0.005	< 0.005	< 0.005	0.48
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
Hauling	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.2	32.2	< 0.005	0.01	0.03	33.7

3.5. Paving (2025) - Unmitigated

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

Location	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	0.56	5.24	7.22	0.01	0.23	—	0.23	0.21	—	0.21	—	1,102	1,102	0.04	0.01	—	1,106
Paving	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	33.2	33.2	< 0.005	< 0.005	—	33.3
Paving	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.50	5.50	< 0.005	< 0.005	—	5.52
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.97	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	176	176	0.01	0.01	0.65	179
Vendor	< 0.005	0.17	0.05	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	153	153	< 0.005	0.02	0.43	160
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.94	4.94	< 0.005	< 0.005	0.01	5.01
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.61	4.61	< 0.005	< 0.005	0.01	4.83
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.83
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.80
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Architectural Coating (2025) - Unmitigated

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

Location	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	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	2.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.66	3.66	< 0.005	< 0.005	—	3.67
Architectural Coatings	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.61	0.61	< 0.005	< 0.005	—	0.61
Architectural Coatings	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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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
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

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	137	137	0.01	< 0.005	—	137
Total	—	—	—	—	—	—	—	—	—	—	—	137	137	0.01	< 0.005	—	137
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	137	137	0.01	< 0.005	—	137
Total	—	—	—	—	—	—	—	—	—	—	—	137	137	0.01	< 0.005	—	137
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	22.7	22.7	< 0.005	< 0.005	—	22.7
Total	—	—	—	—	—	—	—	—	—	—	—	22.7	22.7	< 0.005	< 0.005	—	22.7

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
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

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	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	0.02	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	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	< 0.005	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Total	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Total	—	—	—	—	—	—	—	—	—	—	0.00	1.97	1.97	< 0.005	< 0.005	—	1.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.33	0.33	< 0.005	< 0.005	—	0.33
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.33	0.33	< 0.005	< 0.005	—	0.33

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

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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. 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	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	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	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	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	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	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
Site Preparation	Site Preparation	5/01/2025	5/8/2025	5.00	6.00	—
Grading	Grading	5/9/2025	5/20/2025	5.00	8.00	—
Paving	Paving	5/21/2025	6/4/2025	5.00	11.0	—
Architectural Coating	Architectural Coating	6/5/2025	6/18/2025	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
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
Paving	—	—	—	—
Paving	Worker	12.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	5.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	129	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	6,429

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	9.00	0.00	—
Grading	—	8,231	8.00	0.00	—
Paving	0.00	0.00	0.00	0.00	2.46

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Parking Lot	2.46	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	49.0	49.0	49.0	17,885	657	657	657	239,811

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	0.00	0.00	6,429

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)
Parking Lot	93,870	532	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)
Parking Lot	0.00	254,801

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.8	annual days of extreme heat
Extreme Precipitation	5.10	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	21.4	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	3	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	3	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	100
AQ-PM	46.7
AQ-DPM	62.3
Drinking Water	49.6
Lead Risk Housing	31.0
Pesticides	2.00
Toxic Releases	42.8
Traffic	61.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	65.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	29.1
Cardio-vascular	59.6
Low Birth Weights	33.7
Socioeconomic Factor Indicators	—
Education	53.1
Housing	28.2
Linguistic	5.64
Poverty	44.1
Unemployment	65.6

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	49.39047863
Employed	7.955857821
Median HI	28.39727961
Education	—
Bachelor's or higher	26.08751444
High school enrollment	100
Preschool enrollment	1.873476197
Transportation	—
Auto Access	49.51879892
Active commuting	1.039394328
Social	—
2-parent households	69.19029899
Voting	52.71397408
Neighborhood	—
Alcohol availability	64.81457718
Park access	7.108943924
Retail density	18.0803285
Supermarket access	33.60708328
Tree canopy	28.66675221
Housing	—
Homeownership	88.78480688
Housing habitability	65.43051456
Low-inc homeowner severe housing cost burden	14.98780957
Low-inc renter severe housing cost burden	43.75721802

Uncrowded housing	68.66418581
Health Outcomes	—
Insured adults	54.27948159
Arthritis	0.0
Asthma ER Admissions	71.8
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	6.1
Cognitively Disabled	17.4
Physically Disabled	20.3
Heart Attack ER Admissions	14.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	45.8
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	16.1
SLR Inundation Area	0.0

Children	90.2
Elderly	16.2
English Speaking	59.2
Foreign-born	10.6
Outdoor Workers	12.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.4
Traffic Density	61.9
Traffic Access	23.0
Other Indices	—
Hardship	60.4
Other Decision Support	—
2016 Voting	74.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	35.0
Healthy Places Index Score for Project Location (b)	26.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Per project manager's construction schedule estimates
Construction: Off-Road Equipment	Per construction summary
Construction: Dust From Material Movement	Per construction summary
Land Use	Per site plan, 2.46 acres

Appendix B
CARB EMFAC 2021

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: County
Region: Riverside
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC202x Categories

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel Consumption (miles/gallon)
Riverside	2024	LDA	Aggregate	Aggregate	30.20688981
Riverside	2024	LDT1	Aggregate	Aggregate	24.95313599
Riverside	2024	LDT2	Aggregate	Aggregate	24.6573686
Riverside	2024	MDV	Aggregate	Aggregate	19.92579105
Riverside	2024	LHD1	Aggregate	Aggregate	16.29348522
Riverside	2024	LHD2	Aggregate	Aggregate	15.46482088
Riverside	2024	MHD	Aggregate	Aggregate	8.534439232
Riverside	2024	HHD	Aggregate	Aggregate	6.578326084