# INDEPENDENCE AT CANYON SPRINGS

## ENERGY ANALYSIS

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# LIST OF ABBREVIATED TERMS

| | |
|---|---|
| % | Percent |
| (1) | Reference |
| APN | Assessor's Parcel Number |
| AQIA | Independence at Canyon Springs Air Quality Impact Analysis |
| BACM | Best Available Control Measures |
| BTU | British Thermal Units |
| CalEEMod | California Emissions Estimator Model |
| CAPCOA | California Air Pollution Control Officers Association |
| CARB | California Air Resources Board |
| CCR | California Code of Regulations |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| City | City of Riverside |
| CPUC | California Public Utilities Commission |
| DMV | Department of Motor Vehicles |
| EIA | Energy Information Administration |
| EPA | Environmental Protection Agency |
| EMFAC | EMissions FACtor |
| FERC | Federal Energy Regulatory Commission |
| GHG | Greenhouse Gas |
| GHGA | Independence at Canyon Springs Greenhouse Gas Analysis |
| GWh | Gigawatt Hour |
| HHDT | Heavy-Heavy Duty Trucks |
| hp-hr-gal | Horsepower Hours Per Gallon |
| IEPR | Integrated Energy Policy Report |
| ISO | Independent Service Operator |
| ISTEA | Intermodal Surface Transportation Efficiency Act |
| ITE | Institute of Transportation Engineers |
| kBTU | Kilo British Thermal Units |
| kWh | Kilowatt Hour |
| LDA | Light Duty Auto |
| LDT1/LDT2 | Light-Duty Trucks |
| LHDT1/LHDT2 | Light-Heavy Duty Trucks |
| MDV | Medium Duty Trucks |
| MHDT | Medium-Heavy Duty Trucks |
| MMcfd | Million Cubic Feet Per Day |
| mpg | Miles Per Gallon |
| MPO | Metropolitan Planning Organization |
| PG&E | Pacific Gas and Electric |
| Project | Independence at Canyon Springs |

| | |
|---|---|
| RPU | Riverside Public Utilities |
| SCAB | South Coast Air Basin |
| SDAB | San Diego Air Basin |
| sf | Square Feet |
| SoCalGas | Southern California Gas |
| TEA-21 | Transportation Equity Act for the 21st Century |
| U.S. | United States |
| VMT | Vehicle Miles Traveled |

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# EXECUTIVE SUMMARY

## ES.1 SUMMARY OF FINDINGS

The results of this Independence at Canyon Springs *Energy Analysis* are summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the CEQA Guidelines (CEQA Guidelines) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

### TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

| Analysis | Report Section | Significance Findings | |
|---|---|---|---|
| | | Unmitigated | Mitigated |
| Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | 5.0 | *Less Than Significant* | *n/a* |
| Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | 5.0 | *Less Than Significant* | *n/a* |

## ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21)
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)

Consistency with the above regulations is discussed in detail in Section 5 of this report.

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# 1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Independence at Canyon Springs (Project). The purpose of this report is to ensure that energy implication is considered by the City of Riverside (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

## 1.1 SITE LOCATION

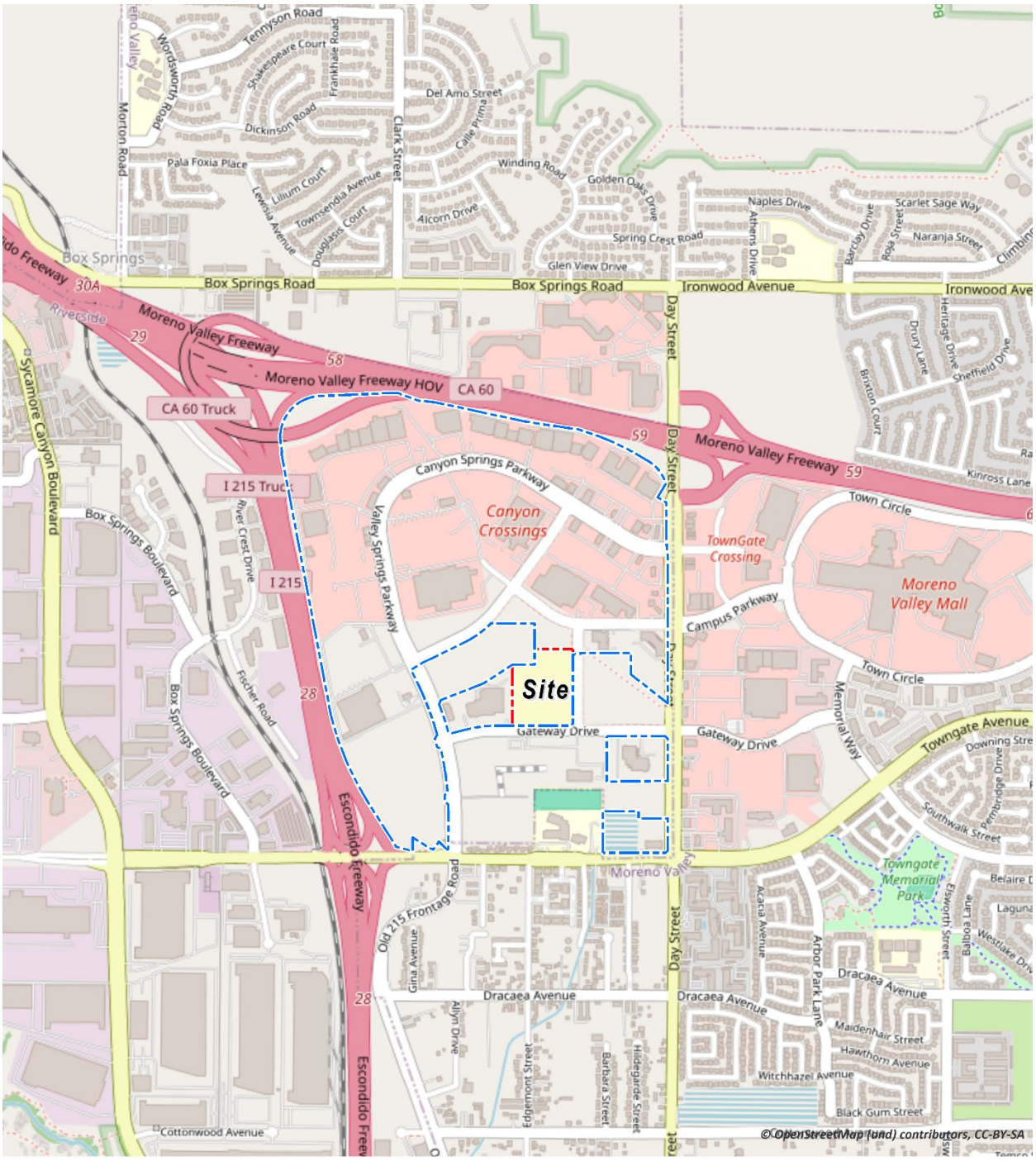
The Project is located at the northwest corner of the intersection of Gateway Drive and Canyon Park Drive in the City of Riverside, and specifically within Planning Area 8B of the Canyon Springs Business Park Specific Plan area. The Project is surrounded by undeveloped land within the Canyon Springs Specific Plan area and Canyons Springs Healthcare Campus Specific Plan area to the north and east, a parking lot to the south, and the Riverside County Registrar of Voters office to the west, as shown in Exhibit 1-A. Gateway Drive and Canyon Park Drive form the southern and eastern boundaries of the Project site, respectively.

## 1.2 PROJECT DESCRIPTION

The proposed development associated with the Project consists of 156 residential units a fitness building, a leasing office, and a pool on approximately 9.13 acres, as shown on Exhibit 1-B. The Project is anticipated to be developed in one phase with an opening year of 2028.

The proposed Project also involves an amendment to the Canyon Springs Business Park Specific Plan to allow for the development of mixed-use/multi-family residential uses within Planning Area 8B, a General Plan Amendment to change from the General Plan Land Use designation for the Project site from C - Commercial to MU-U – Mixed Use – Urban (max. 40 du/ac), and a Zoning Code Amendment to rezone the property from O - Office to MU-U – Mixed Use - Urban (40 du/ac).

## EXHIBIT 1-A: LOCATION MAP




**LEGEND:**

Site Boundary | Canyon Springs Business Park Specific Plan

## EXHIBIT 1-B: SITE PLAN



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# 2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

## 2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2023, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates and includes (2):

- As of 2023, approximately 6,817 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2023, approximately 648 million barrels of petroleum
- As of 2023, approximately 2,085 billion cubic feet of natural gas
- As of 2023, approximately 1,277 thousand short tons of coal

According to the EIA, in 2023 the U.S. petroleum consumption comprised about 89% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (3). In 2024, about 251,265 million gallons (or about 5,983 million barrels) of finished petroleum products were consumed in the U.S., an average of about 687 million gallons per day (or about 16.4 million barrels per day) (4). In 2021, California consumed approximately 12,147 million gallons in motor gasoline (33.31 million gallons per day) and approximately 3,541 million gallons of diesel fuel (9.7 million gallons per day) (5).

The most recent data provided by the EIA for energy use in California is reported from 2023, which shows approximate energy usage by each of the following sectors:

- 44.5% for transportation uses
- 21.4% for industrial uses
- 17.1% for residential uses
- 17.0% for commercial uses (6)

According to the EIA, California used approximately 239,480 million kilowatt hours (kWh) of electricity in 2023 (7). By sector in 2023, residential uses utilized 34.6% of the state's electricity, followed by 47.2% for commercial uses, 18.0% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building (7).

According to the EIA, California used approximately 21,292 million therms of natural gas in 2023 (8). In 2023 (the most recent year for which data is available), by sector, industrial uses utilized 31.6% of the state's natural gas, followed by 31.3% used as fuel in the electric power sector, 22.8% from residential, 12.7% from commercial, 1.5% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself (8). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (8).

In 2023, total system electric generation for California was 281,140 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 215,623 GWh which accounted for approximately 76% of the electricity it uses; the rest was imported from the

Pacific Northwest (6%) and the U.S. Southwest (18%) (9). Natural gas is the main source for electricity generation at 43.68% of the total in-state electric generation system power as shown in Table 2-1.

An updated 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 (10):

- In 2024, California was the fourth-largest electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports the second largest amount of electricity of any state.
- In 2024, California was the eighth-largest producer of crude oil among the 50 states, and the state ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states.
- California is the second-largest total energy consumer among the states, but its per capita energy consumption is the third-lowest in the nation.
- In 2024, renewable resources, including hydroelectric power and small-scale solar power, supplied 57% of California's in-state electricity generation. Natural gas fueled another 35% and nuclear power provided almost all the rest.

As indicated below, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

## TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2023)

| Fuel Type | California In-State Generation (GWh) | % of California In-State Generation | Northwest Imports (GWh) | Southwest Imports (GWh) | Total Imports (GWh) | Total California Energy Mix (GWh) | Total California Power Mix |
|---|---|---|---|---|---|---|---|
| Coal | 257 | 0.12% | 163 | 4,561 | 4,724 | 4,981 | 1.77% |
| Natural Gas | 94,192 | 43.68% | 52 | 8,530 | 8,582 | 102,774 | 36.56% |
| Oil | 36 | 0.02% | 0 | 0 | 0 | 36 | 0.01% |
| Other (Waste Heat/Petroleum Coke) | 206 | 0.10% | 0 | 0 | 0 | 206 | 0.07% |
| Unspecified | 0 | 0.00% | 100 | 10,273 | 10,373 | 10,373 | 3.69% |
| *Total Thermal and Unspecified* | *94,690* | *43.91%* | *316* | *23,363* | *23,679* | *118,370* | *42.10%* |
| Nuclear | 17,714 | 8.22% | 196 | 8,361 | 8,558 | 26,272 | 9.34% |
| Large Hydro | 27,066 | 12.55% | 4,712 | 1,109 | 5,821 | 32,886 | 11.70% |
| Biomass | 5,037 | 2.34% | 753 | - | 753 | 5,790 | 2.06% |
| Geothermal | 10,999 | 5.10% | 221 | 2,347 | 2,569 | 13,567 | 4.83% |
| Small Hydro | 4,853 | 2.25% | 133 | 2 | 135 | 4,988 | 1.77% |
| Solar | 41,344 | 19.17% | 417 | 6,108 | 6,525 | 47,869 | 17.03% |
| Wind | 13,920 | 6.46% | 9,177 | 8,302 | 17,479 | 31,399 | 11.17% |
| Total Non-GHG and Renewable Resources | 120,932 | 56.09% | 15,609 | 26,229 | 41,838 | 162,771 | 57.90% |
| *System Totals* | 215,623 | 100.00% | 15,925 | 49,593 | 65,518 | 281,140 | 100.00% |

Source: CECs 2023 Total System Electric Generation

## 2.2 ELECTRICITY

The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California Independent Service Operator (ISO) studies revealed the extent to which the Mojave Desert Air Basin (MDAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts. Similarly, the subsequent 2024 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system (11).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California ISO is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (12).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Electricity is currently provided to the Project site by Riverside Public Utilities (RPU). RPU provides electric power to approximately 112,328 people within a service area encompassing approximately 82 square miles in the City of Riverside. Based on RPU's 2023 Power Content Label Mix, RPU derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. RPU also purchases from independent power producers and utilities, including out-of-state suppliers (13).

Table 2-2, RPU's specific proportional shares of electricity sources in 2023. As indicated in Table 2-2, the 2023 RPU Power Mix has renewable energy at 46.4% of the overall energy resources. Biomass and waste resources are at 0%, geothermal resources are at 35.4%, eligible hydroelectric resources are at 0%, solar energy is at 10.0%, and wind power is at 1.1% (14).

### TABLE 2-2: RPU 2023 POWER CONTENT MIX

| Energy Resources | 2023 RPU Power Mix |
|---|---|
| *Eligible Renewable* | 46.4% |
| Biomass & Waste | 0.0% |
| Geothermal | 35.4% |
| Eligible Hydroelectric | 0.0% |
| Solar | 10.0% |
| Wind | 1.1% |
| *Coal* | 16.3% |
| *Large Hydroelectric* | 1.1% |
| *Natural Gas* | 3.3% |
| *Nuclear* | 5.0% |
| *Other* | 0.0% |
| Unspecified Sources of Power* | 27.9% |
| *Total* | 100% |

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

## 2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 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 natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California 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%.*

*A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.*

*SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.*

*Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the CPUC may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.*

*The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.*

*Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.*

*PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.*

*Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.*

*The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.*

*Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.*

*In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).*

*In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.*

*Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply*

*arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.*

*In order [to] properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California."* (15)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the State in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

## 2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) reported 35.9 million registered vehicles in California as of January 1, 2025 which is the most current data available at the time this analysis was prepared. The 2021 EMissions FACtor (EMFAC) model was utilized to estimate the annual fuel consumption, based on EMFAC 18.5 billion gallons of fuel are estimated to be consumed in 2025 (16).[1] Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (6). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 9% of the nation's total consumption. The State is the largest U.S. consumer of jet fuel and the second

[1] Fuel consumptions estimated utilizing information from EMFAC2021.

largest U.S. consumer of motor gasoline. 86% of the petroleum consumed in California is used in the transportation sector (17).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2024, about 31% of the natural gas delivered to consumers went to the State's industrial sector, and about 30% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the State's utility-scale electricity generation in 2024. The residential sector, where three-fifths of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 15% of the deliveries to end users and the transportation sector consumed the remaining 1% (17).

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# 3 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 (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

## 3.1 FEDERAL REGULATIONS

### 3.1.1 Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The 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.

### 3.1.2 The Transportation Equity Act for the 21st Century (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. The TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. The TEA-21 continues the program structure 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. The 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 (ITS), to help improve operations and management of transportation systems and vehicle safety.

## 3.2 CALIFORNIA REGULATIONS

### 3.2.1 Integrated Energy Policy Report (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the 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 (Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2024 IEPR was adopted September 2025, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2024 IEPR provides critical updates on California's energy future, focusing on several key areas. It includes an updated energy demand forecast, offering revised projections for electricity consumption and generation needs. Additionally,

the report evaluates the feasibility, costs, and potential benefits of wave and tidal energy resources in accordance with SB 605, which aims to explore alternative renewable energy sources for the state (18).

Compared to the 2023 IEPR, the 2024 update introduces new insights and considerations, particularly in the context of emerging renewable energy technologies like wave and tidal energy and further refines the demand forecasts. This edition provides a more comprehensive view of California's evolving energy landscape and the role of innovative resources in meeting future energy needs.

### 3.2.2 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 State Energy 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 several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

### 3.2.3 Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

The Project would be subject to applicable Title 24 standards in place at the time building permits applications are made. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards effective on January 1, 2026.

### 3.2.4 AB 1493 Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required California Air Resources Board (CARB) to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

### 3.2.5 California's Renewable Portfolio Standard (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 44% of total retail sales by 2024 (19).

### 3.2.6 Clean Energy and Pollution Reduction Act of 2015 (SB 350)

In October 2015, the legislature approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 45% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

### 3.2.7 Executive Order N-79-20 and Advanced Clean Cars II

On August 25, 2022, CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that between 2026 and 2040, the regulation would reduce GHG emissions by a cumulative 395 million metric tons, equivalent to reducing petroleum use by 915 million barrels.

## 3.3 Local Regulations

### 3.3.1 City of Riverside General Plan

The proposed Project has been evaluated for consistency with applicable policies from the City of Riverside 2025 General Plan, particularly those supporting energy efficiency, air quality improvement, and sustainable development. Relevant objectives and policies from the Air Quality, Open Space & Conservation, and Public Facilities and Infrastructure Elements are summarized below, with an emphasis on those most pertinent to energy conservation and GHG reduction:

Air Quality Element

- Objective AQ-5: Increase energy efficiency and conservation to reduce air pollution.
- Policy AQ-5.1: Promote source reduction and recycling to minimize landfill waste.
- Policy AQ-5.3: Encourage expansion of renewable energy resources (e.g., solar, wind, landfill gas).

- Policy AQ-5.6: Support use of automated systems to control HVAC energy use.
- Policy AQ-5.7: Require residential development to meet or exceed Title 24 energy standards.

Open Space & Conservation Element

- Policy OS-8.2 / OS-8.3 / OS-8.4: Require incorporation of energy conservation features and encourage alternative energy use in all new construction.
- Policy OS-8.5: Promote solar access in development regulations.
- Policy OS-8.6: Develop landscaping guidelines that support passive energy efficiency.
- Policy OS-8.7 / OS-8.10: Require energy-efficient lighting, HVAC systems, and support mixed-use development to reduce VMT.
- Policy OS-8.12: Encourage alternative transportation options and require bicycle parking for non-residential development.

Public Facilities and Infrastructure Element

- Objective PF-6: Provide reliable and environmentally responsible energy to the community.
- Policy PF-6.3: Promote energy conservation practices.
- Policy PF-6.4 / PF-6.5: Encourage energy-efficient site planning and green building design.

The proposed Project is consistent with these General Plan policies through its commitment to all-electric residential development, compliance with Title 24 energy standards in effect at the time building permits are requested, integration of energy-efficient appliances and systems, and incorporation of walkability and connectivity features that support alternative transportation. Additionally, the Project will implement construction waste diversion measures, and landscaping plans that contribute to reduced energy demand, further aligning with the City's long-term sustainability goals.

### 3.3.2 Riverside Restorative Growthprint (RRG) Climate Action Plan (CAP)

The City of Riverside collaborated with the Western Riverside Council of Governments (WRCOG) on a Subregional Climate Action Plan (CAP), and subsequently adopted the RRG CAP, which builds upon the WRCOG framework to establish local GHG reduction targets through 2035. While the City's CAP is not a qualified GHG reduction plan under CEQA Guidelines Section 15183.5, it does include numerous measures and strategies intended to support both greenhouse gas and energy reduction goals. Specifically, the Energy sector of the RRG CAP promotes the use of energy-efficient building design, appliance standards, renewable energy systems (e.g., solar PV), and electrification of buildings and vehicles to reduce community-wide energy demand and associated emissions. These measures are consistent with the City's broader climate objectives, including reducing dependence on fossil fuels, enhancing local energy resilience, and achieving long-term carbon neutrality by 2040 as proposed under the City's forthcoming Climate Action and Adaptation Plan (CAAP).

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# 4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

## 4.1 EVALUATION CRITERIA

Appendix F of the *State CEQA Guidelines* (20) 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.

In compliance with Appendix G of the *State CEQA Guidelines* (21), this report analyzes the Project's anticipated energy use during construction and operations to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

## 4.2 METHODOLOGY

Information from the CalEEMod Version 2022.1 outputs for the *Independence at Canyon Springs Air Quality Impact Analysis* (AQIA) (22) was utilized in this analysis, detailing Project-related construction equipment, transportation energy demands, and facility energy demands.

### 4.2.1 CalEEMod

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage (23). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendix 4.1.

### 4.2.2 Emission Factors Model

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (24). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of analysis, the 2027 and 2028 analysis

years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2021 model run is provided in Appendix 4.2.

## 4.3 Construction Energy Demands

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

### 4.3.1 Construction Power Cost

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

#### Construction Duration

For purposes of analysis, it is conservatively assumed that construction will begin in January 2027 and would last through October 2028; however, it is anticipated that construction will be later than January 2027 (22). The construction schedule utilized in the analysis, shown in Table 4-1, represents a "worst-case" analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (25).

**Table 4-1: Construction Duration**

| Construction Activity | Start Date | End Date | Days |
|---|---|---|---|
| Site Preparation and Grading | 1/1/2027 | 1/21/2027 | 15 |
| Foundation | 2/18/2027 | 9/10/2027 | 147 |
| Curb & Gutter and Paving | 1/21/2027 | 7/6/2027 | 119 |
| Framing and Architectural Coating (Building Construction) | 5/14/2027 | 10/28/2028 | 381 |
| On-Site Wet and Dry Utilities | 1/21/2027 | 9/3/2027 | 162 |

#### Project Construction Power Cost

The *2025 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.85, which was used to calculate the Project's total construction power cost (26). As shown in Table 4-2, the total power cost of on-site electricity usage during the Foundation (building construction) of the Project is estimated to be approximately $13,485.46.

**Table 4-2: Construction Power Cost**

| Land Use | Power Cost (per 1,000 SF) | Total Building Size (1,000 SF) | Construction Duration (months) | Total Project Construction Power Cost |
|---|---|---|---|---|
| Residential | $2.85 | 225.321 | 21 | $13,485.46 |
| | | | Total Project Construction Cost | $13,485.46 |

### 4.3.2 Construction Electricity Usage

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-2) by the utility provider cost per kWh of electricity.

#### Project Construction Electricity Usage

The RPU's general service rate schedule was used to determine the Project's electrical usage. As of June 1, 2025, RPU's general service rate is $0.19 per kWh of electricity for residential uses (27). As shown in Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 72,789 kWh.

**TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE**

| Land Use | Cost per kWh | Total Project Construction Electricity Usage |
|---|---|---|
| Residential | $0.19 | 72,789 |
| Total Project Construction Electricity Usage (kWh) | | 72,789 |

### 4.3.3 Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

#### Construction Equipment

A summary of construction equipment assumptions by phase is provided at Table 4-4. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the City Code. It should be noted that assuming construction equipment would operate for 8 hours per day is a conservative estimate, as actual equipment usage is typically less and may vary throughout the day depending on construction phasing and scheduling.

**TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS**

| Construction Activity | Equipment | Quantity | Hours |
|---|---|---|---|
| Site Preparation and Grading | Excavators | 1 | 8 |
| | Off-Highway Trucks | 2 | 8 |
| | Graders | 1 | 8 |
| | Rubber Tired Dozers | 1 | 8 |
| | Crawler Tractors | 8 | 8 |
| Foundation | Forklifts | 3 | 8 |
| | Generator Sets | 1 | 8 |
| | Tractors/Loaders/Backhoes | 3 | 8 |

| Construction Activity | Equipment | Quantity | Hours |
|---|---|---|---|
| Curb & Gutter and Paving | Pavers | 2 | 8 |
| | Paving Equipment | 2 | 8 |
| | Rollers | 2 | 8 |
| Framing and Architectural Coating (Building Construction) | Air Compressors | 1 | 8 |
| On-Site Wet and Dry Utilities | Rubber Tired Dozers | 2 | 8 |
| | Excavators | 1 | 8 |

### Project Construction Equipment Fuel Consumption

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer Guidelines (28). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing residential fuel providers serving the Project area and region.[2] As presented in Table 4-5, Project construction activities would consume an estimated 47,602 gallons of diesel fuel. 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.

[2] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

## TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATE

| Activity | Duration (Days) | Equipment | HP Rating | Quantity | Usage Hours | Load Factor | HP-hrs/day | Total Fuel Consumption |
|---|---|---|---|---|---|---|---|---|
| Site Preparation and Grading | 15 | Excavators | 36 | 1 | 8 | 0.38 | 109 | 89 |
| | | Off-Highway Trucks | 376 | 2 | 8 | 0.38 | 2,286 | 1,854 |
| | | Graders | 148 | 1 | 8 | 0.41 | 485 | 394 |
| | | Rubber Tired Dozers | 367 | 1 | 8 | 0.4 | 1,174 | 952 |
| | | Crawler Tractors | 87 | 8 | 8 | 0.43 | 2,394 | 1,941 |
| Foundation | 147 | Forklifts | 82 | 3 | 8 | 0.2 | 394 | 3,128 |
| | | Generator Sets | 14 | 1 | 8 | 0.74 | 83 | 659 |
| | | Tractors/Loaders/Backhoes | 84 | 3 | 8 | 0.37 | 746 | 5,927 |
| Curb & Gutter and Paving | 119 | Pavers | 81 | 2 | 8 | 0.42 | 544 | 3,501 |
| | | Paving Equipment | 89 | 2 | 8 | 0.36 | 513 | 3,298 |
| | | Rollers | 36 | 2 | 8 | 0.38 | 219 | 1,408 |
| Framing and Architectural Coating (Building Construction) | 381 | Air Compressors | 37 | 1 | 8 | 0.48 | 142 | 2,926 |
| On-Site Wet and Dry Utilities | 162 | Rubber Tired Dozers | 367 | 2 | 8 | 0.4 | 2,349 | 20,568 |
| | | Excavators | 36 | 1 | 8 | 0.38 | 109 | 958 |
| Total Construction Fuel Demand (Gallons Fuel) | | | | | | | | 47,602 |

### 4.3.4 Construction Trips and VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 4-6. It should be noted that for Vendor Trips specifically, CalEEMod only assigns Vendor Trips to the Foundation (Building Construction) phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for Vendor Trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity

**TABLE 4-6: CONSTRUCTION TRIPS AND VMT**

| Construction Activity | Worker Trips | Vendor Trips | Hauling Trips |
|---|---|---|---|
| Site Preparation and Grading | 33 | 1 | 85 |
| Foundation | 57 | 6 | 0 |
| Curb & Gutter and Paving | 15 | 5 | 0 |
| Framing and Architectural Coating (Building Construction) | 57 | 16 | 0 |
| On-Site Wet and Dry Utilities | 8 | 7 | 0 |

### 4.3.5 Construction Worker Fuel Estimates

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 645,225 VMT during the 21 months of construction (22). Based on CalEEMod methodology, it is assumed that 50% of all worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[3]), and 25% are from light-duty-trucks (LDT2[4]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (24). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2027 and 2028 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 25,356 gallons of fuel will be consumed related to construction worker trips during full construction of the Project. It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

[3] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

## TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

| Year | Construction Activity | Duration (Days) | Worker Trips/Day | Trip Length (miles) | Vehicle Miles Traveled | Average Vehicle Fuel Economy (mpg) | Estimated Fuel Consumption |
|---|---|---|---|---|---|---|---|
| 2027 | LDA | | | | | | |
| | Site Preparation and Grading | 15 | 17 | 18.5 | 4,718 | 34.29 | 138 |
| | Foundation | 147 | 29 | 18.5 | 78,866 | 34.29 | 2,300 |
| | Curb & Gutter and Paving | 119 | 8 | 18.5 | 17,612 | 34.29 | 514 |
| | Framing and Architectural Coating (Building Construction) | 166 | 29 | 18.5 | 89,059 | 34.29 | 2,598 |
| | On-Site Wet and Dry Utilities | 162 | 4 | 18.5 | 11,988 | 34.29 | 350 |
| | LDT1 | | | | | | |
| | Site Preparation and Grading | 15 | 9 | 18.5 | 2,498 | 26.22 | 95 |
| | Foundation | 147 | 15 | 18.5 | 40,793 | 26.22 | 1,556 |
| | Curb & Gutter and Paving | 119 | 4 | 18.5 | 8,806 | 26.22 | 336 |
| | Framing and Architectural Coating (Building Construction) | 166 | 15 | 18.5 | 46,065 | 26.22 | 1,757 |
| | On-Site Wet and Dry Utilities | 162 | 2 | 18.5 | 5,994 | 26.22 | 229 |
| | LDT2 | | | | | | |
| | Site Preparation and Grading | 15 | 9 | 18.5 | 2,498 | 16.30 | 153 |
| | Foundation | 147 | 15 | 18.5 | 40,793 | 16.30 | 2,503 |
| | Curb & Gutter and Paving | 119 | 4 | 18.5 | 8,806 | 16.30 | 540 |
| | Framing and Architectural Coating (Building Construction) | 166 | 15 | 18.5 | 46,065 | 16.30 | 2,826 |
| | On-Site Wet and Dry Utilities | 162 | 2 | 18.5 | 5,994 | 16.30 | 368 |

| Year | Construction Activity | Duration (Days) | Worker Trips/Day | Trip Length (miles) | Vehicle Miles Traveled | Average Vehicle Fuel Economy (mpg) | Estimated Fuel Consumption |
|---|---|---|---|---|---|---|---|
| 2028 | | | LDA | | | | |
| | Framing and Architectural Coating (Building Construction) | 215 | 29 | 18.5 | 115,348 | 35.14 | 2,282 |
| | | | LDT1 | | | | |
| | Framing and Architectural Coating (Building Construction) | 215 | 15 | 18.5 | 59,663 | 26.76 | 2,229 |
| | | | LDT2 | | | | |
| | Framing and Architectural Coating (Building Construction) | 215 | 15 | 18.5 | 59,663 | 16.65 | 3,583 |
| Total Construction Worker Fuel Consumption (Gallons) | | | | | | | 25,356 |

### 4.3.6 Construction Vendor/Hauling Fuel Estimates

With respect to estimated VMT, the construction vendor/hauling trips (vehicles that deliver materials to the site during construction) would generate an estimated 117,178 VMT along area roadways for the Project over the duration of construction activity (22). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT), 50% of vendor trips are from heavy-heavy duty trucks (HHDT), and 100% of hauling trips are from HHDT. These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (22). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHDT and HHDT vehicle classes within the California sub-area for the 2027 and 2028 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

As previously shown in Table 4-8, it is estimated that 16,117 gallons of fuel will be consumed related to construction vendor/hauling trips during full construction of the Project. It should be noted that Project construction vendor/hauling trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

## TABLE 4-8: CONSTRUCTION VENDOR/HAULING FUEL CONSUMPTION ESTIMATES

| Year | Construction Activity | Duration (Days) | Vendor/Hauling Trips / Day | Trip Length (miles) | Vehicle Miles Traveled | Average Vehicle Fuel Economy (mpg) | Estimated Fuel Consumption |
|---|---|---|---|---|---|---|---|
| 2027 | MHDT | | | | | | |
| | Foundation | 147 | 3 | 10.2 | 4,498 | 8.87 | 507 |
| | Curb & Gutter and Paving | 119 | 3 | 10.2 | 3,641 | 8.87 | 410 |
| | Framing and Architectural Coating (Building Construction) | 166 | 8 | 10.2 | 13,546 | 8.87 | 1,526 |
| | On-Site Wet and Dry Utilities | 162 | 4 | 10.2 | 6,610 | 8.87 | 745 |
| | HHDT (Vendor) | | | | | | |
| | Foundation | 147 | 3 | 10.2 | 4,498 | 6.45 | 697 |
| | Curb & Gutter and Paving | 119 | 3 | 10.2 | 3,641 | 6.45 | 564 |
| | Framing and Architectural Coating (Building Construction) | 166 | 8 | 10.2 | 13,546 | 6.45 | 2,100 |
| | On-Site Wet and Dry Utilities | 162 | 4 | 10.2 | 6,610 | 6.45 | 1,025 |
| | HHDT (Hauling) | | | | | | |
| | Site Preparation and Grading | 15 | 85 | 20 | 25,500 | 6.45 | 3,953 |
| 2028 | MHDT | | | | | | |
| | Framing and Architectural Coating (Building Construction) | 215 | 8 | 10.2 | 17,544 | 9.09 | 1,931 |
| | HHDT (Vendor) | | | | | | |
| | Framing and Architectural Coating (Building Construction) | 215 | 8 | 10.2 | 17,544 | 6.60 | 2,659 |
| Total Construction Vendor/Hauling Fuel Consumption (Gallons) | | | | | | | 16,117 |

### 4.3.7 Construction Energy Efficiency/Conservation Measures

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that 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 the construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, 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. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of 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.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

## 4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by building operations and site maintenance activities).

### 4.4.1 Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class can be determined by evaluating the vehicle fleet mix and the total VMT. As with worker, vendor, and hauling trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (24). EMFAC2021 was run for the Riverside (SC) area for the 2028 calendar year. Data from EMFAC2021 is shown in Appendix 4.2.

As summarized in Table 4-9, the Project would result in 5,500,632 annual VMT and an estimated annual fuel consumption of 212,013 gallons of fuel.

**TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION**

| Vehicle Type | Average Vehicle Fuel Economy (mpg) | Annual VMT | Estimated Annual Fuel Consumption |
|---|---|---|---|
| LDA | 35.14 | 2,722,604 | 77,471 |
| LDT1 | 26.76 | 198,592 | 7,420 |
| LDT2 | 27.23 | 1,166,102 | 42,822 |
| MDV | 21.91 | 857,704 | 39,141 |
| LHDT1 | 17.78 | 167,150 | 9,404 |
| LHDT2 | 16.65 | 47,852 | 2,874 |
| MHDT | 9.09 | 83,013 | 9,136 |
| HHDT | 6.60 | 91,585 | 13,880 |
| OBUS | 7.04 | 3,208 | 456 |
| UBUS | 6.13 | 2,089 | 341 |
| MCY | 42.30 | 123,814 | 2,927 |
| SBUS | 6.50 | 7,302 | 1,124 |
| MH | 5.90 | 29,614 | 5,017 |
| Total Annual Fuel Consumption (Gallons) | | 5,500,632 | 212,013 |

### 4.4.2 Facility Energy Demands

Project building operations activities would result in the consumption of electricity, which would be supplied to the Project by RPU. As summarized on Table 4-10, the Project would result in 1,509,199 kWh/year of electricity demand and 5,548,033 kBTU/year of natural gas based on CalEEMod defaults for the Project's land uses. It should be noted that the Project would include all-electric buildings, and would utilize on-site solar generation; however, as a conservative measure no credit has been taken for the all-electric Project and solar generation.

The natural gas figure shown in Table 4-10 does not reflect actual anticipated Project fuel consumption; rather, it represents a hypothetical natural gas equivalent included solely as a conservative analytical assumption to avoid underestimating total energy use. Because the Project is designed as an all-electric facility, natural gas service would not be provided to the Project site and no natural gas would be consumed during Project operations.

The electricity estimate of 1,509,199 kWh/year presented in Table 4-10 was derived using a conservative mixed-fuel modeling assumption in CalEEMod rather than an explicitly all-electric configuration. If the all-electric design were modeled directly, annual electricity demand would increase modestly, as end uses typically served by natural gas—such as space heating and water heating—would instead be met through electricity; however, this increase would be offset by the complete elimination of on-site natural gas consumption. Natural gas combustion generates comparatively higher criteria air pollutant and greenhouse gas emissions per unit of energy delivered than grid-supplied electricity from RPU, which benefits from an increasingly renewable generation mix. Accordingly, the conservative inclusion of natural gas in the energy model ensures that air quality, greenhouse gas, and energy impacts are not understated across technical areas—if anything, the analyzed condition overstates actual Project emissions. Furthermore, because the shift to all-electric effectively transfers energy load from gas to electricity rather than adding net new demand, the total combined energy envelope is not materially different from the modeled condition. Even under the conservative mixed-fuel assumption, Project energy use was determined to be less than significant; under the actual all-electric design, operational emissions would be lower than analyzed, further supporting this finding.

**TABLE 4-10: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY**

| Energy Type | Natural Gas (kBTU/year) | Electricity (kWh/year) |
|---|---|---|
| Single Family Housing | 5,548,033 | 1,456,922 |
| Parking Lot | 0 | 52,277 |
| Total Energy Usage | 5,548,033 | 1,509,199 |

### 4.4.3 Operational Energy Efficiency/Conservation Measures

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Standards Code).

The Project incorporates a series of measures that generally reduce energy demand associated with the Project. As previously stated, the Project will comply with Title 24 Standards which include incorporating contemporary design features such as photovoltaic systems or renewable energy for new homes.

The Project would be all electric with no use of natural gas. Additionally, it is anticipated that solar will be utilized for on-site generation.

The Project would also not result in a substantial increase in demand for transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure (other than site-adjacent and on-site connects to local utilities).

### Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Table 4-9 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. The Project's location near regional and local road networks helps decrease VMT in the area, which in turn reduces the overall energy demand for vehicles in the region.

## 4.5 SUMMARY

### 4.5.1 Construction Energy Demands

The estimated power cost of on-site electricity usage during the building construction of the Project is assumed to be approximately $13,485.46. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 72,789 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 47,602 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 25,356 gallons of fuel. Additionally, fuel consumption from construction vendor/hauling trips (MHDTs and HHDTs) will total approximately 16,117 gallons. Diesel fuel would be supplied by City and regional residential vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2024 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (29). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

### 4.5.2 Operational Energy Demands

#### Transportation Energy Demands

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 212,013 gallons of fuel.

Fuel would be provided by current and future residential vendors. Trip generation and VMT generated by the Project are consistent with other residential uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other residential uses.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. The Project's location near regional and local road networks helps decrease VMT in the area, which in turn reduces the overall energy demand for vehicles in the region. The Project would implement sidewalks and bike lanes, that would facilitate, encourage and connect pedestrian access to regional shopping areas that are located approximately 0.5 miles of the Project site. Additionally, facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

### Facility Energy Demands

Project facility operational energy demands are conservatively estimated to result in 5,548,033 kBTU/year of natural gas; however, no natural gas would be used at the Project site. Additionally, Project facility operational energy demands are estimated to result in 1,509,199 kWh/year of electricity demand for the Project, which would be supplied by RPU. The Project proposes conventional residential uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other residential uses of similar scale and configuration.

The Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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# 5 CONCLUSIONS

## 5.1 ENERGY IMPACT 1

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

### Impact Analysis

As discussed below, Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. No mitigation is required.

### Construction

Based on CalEEMod estimations within the modeling output, construction-related vehicle trips would result in approximately 762,402 VMT and consume an estimated 41,474 gallons of gasoline and diesel combined during construction. Additionally, on-site construction equipment would consume an estimated 47,602 gallons of diesel fuel. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California Code of Regulations, Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the CARB. Additionally, given the cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed Project would not result in wasteful, inefficient, and unnecessary consumption of energy. Therefore, the construction-related impacts related to electricity and fuel consumption would be less than significant.

### Operation

### Electricity and Natural Gas

Operation of the proposed Project would consume energy as part of building operations and transportation activities including passenger vehicle traffic. Building operations would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations for the Project would result in approximately 5,548,033 kBTU/year of natural gas and 1,509,199 kWh/year of electricity demand annually.

The proposed Project would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards and would help reduce the amount of energy required for lighting, water

heating, and heating and air conditioning in buildings and promote energy conservation. The Project would not use natural gas. Additionally, it is anticipated that solar will be utilized for on-site generation.

### Fuel

Operational energy would also be consumed during vehicle trips associated with the proposed Project. Fuel consumption would be primarily related to vehicle use by residents, visitors, and employees associated with the Project. Based on CalEEMod energy use estimations, project-related vehicle trips would result in approximately 5,500,632 VMT and consume an estimated 212,013 gallons of gasoline and diesel combined, annually (see Appendix 4.2).

The Project is within close proximity of existing land uses that would provide future residents access to facilities such as schools, supermarkets, restaurants and other commercial uses, which would further reduce fuel consumption demand. For these reasons, operational-related transportation fuel consumption would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the operational impact related to vehicle fuel consumption would be less than significant.

## 5.2 Energy Impact 2

Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

### Impact Analysis

As discussed below, the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. No mitigation is required.

### Construction

As discussed in Section 5.1 above, the proposed Project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings used during construction, lighting, and other sources. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. The proposed Project would comply with these regulations. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction-related energy efficiency and renewable energy standards consistency impacts would be less than significant.

### Operation

California's Renewable Portfolio Standard (RPS) establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly, the State is promoting renewable energy targets to meet the 2022 Scoping Plan greenhouse gas emissions reductions. As discussed in Section 5.1 above,

based on a conservative analysis, the Project would result in approximately 5,548,033 kBTU/year of natural gas and 1,509,199 kWh/year of electricity demand annually.

The proposed Projects would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation. The Project would not use natural gas. Additionally, it is anticipated that solar will be utilized for on-site generation.

## State and Local Plan Applicability

### Consistency with ISTEA

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site.

Consistency with ISTEA supports decreasing overall per capita energy consumption and decreased reliance on fossil fuels, consistent with State CEQA Guidelines Appendix F as residents traveling to and from the site can use public transportation which would decrease fuel and overall VMT.

### Consistency with TEA-21

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

Consistency with TEA-21 supports decreasing overall per capita energy consumption and decreased reliance on fossil fuels, consistent with State CEQA Guidelines Appendix F as residents traveling to and from the site can use public transportation which would decrease fuel and overall VMT.

### Consistency with IEPR

Electricity would be provided to the Project by RPU. RPU's *Energy Efficiency Programs* builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2024 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the proposed Project would support the goals presented in the 2024 IEPR.

Consistency with IEPR supports decreasing overall per capita energy consumption, decreased reliance on fossil fuels and increased reliance on renewable energy sources, consistent with State CEQA Guidelines Appendix F.

### Consistency with State of California Energy Plan

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, takes advantage of existing infrastructure systems, and promotes land use compatibilities. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

Consistency with the State of California Energy Plan supports decreasing overall per capita energy consumption and reliance on fossil fuels, consistent with State CEQA Guidelines Appendix F as residents traveling to and from the site can use public transportation which would decrease fuel and overall VMT.

### Consistency with California Code Title 24, Part 6, Energy Efficiency Standards

The Project would be subject to applicable Title 24 standards in place at the time building permits applications are made. Therefore, the Project is would not result in a significant impact on energy resources (30).

Consistency with Title 24 standards support decreasing overall per capita energy consumption, decreased reliance on fossil fuels and increased reliance on renewable energy sources consistent with State CEQA Guidelines Appendix F as the Project would need to incorporate energy efficiency standards as discussed in Section 3.2.3 of this report.

### Consistency with California Code Title 24, Part 11, CALGreen

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. The Project would be subject to applicable Title 24 standards in place at the time building permits applications are made. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards effective on January 1, 2026.

Consistency with Title 24 standards support decreasing overall per capita energy consumption, decreased reliance on fossil fuels and increased reliance on renewable energy sources consistent with State CEQA Guidelines Appendix F as the Project would need to incorporate energy efficiency standards as discussed in Section 3.2.3 of this report.

### Consistency with AB 1493

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. The Project would not interfere with implementation of the requirements under AB 1493.

This would also ensure consistency with State CEQA Guidelines Appendix F as the project would interfere with implementation of AB 1493, therefore, decreasing reliance on fossil fuels.

### Consistency with RPS

California's Renewable Portfolio Standard is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS.

This would also ensure consistency with State CEQA Guidelines Appendix F as the project would not interfere with implementation of the RPS, therefore, increasing reliance on renewable energy sources.

### Consistency with SB 350

The proposed Project would use energy from RPU, which has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new residential developments and would include several measures designed to reduce energy consumption.

This would also ensure consistency with State CEQA Guidelines Appendix F as the project would not interfere with implementation of SB350, therefore, increasing reliance on renewable energy sources.

### Consistency with Executive Order N-79-20 and Advanced Clean Cars II

Executive Order N-79-20 and CARB's Advanced Clean Cars II (ACC II) regulation establish a statewide transition to zero-emission light-duty vehicles, requiring that 100 percent of new passenger cars and light trucks sold in California be zero-emission vehicles by 2035. The ACC II rule requires automakers to progressively increase zero-emission vehicle deliveries beginning with model year 2026 and is projected to substantially reduce petroleum consumption and associated greenhouse gas emissions statewide.

The Project would not interfere with implementation of Executive Order N-79-20 or the Advanced Clean Cars II regulation. All vehicles accessing the Project site would be subject to statewide vehicle emission standards and fleet turnover requirements established by CARB. As newer, more efficient, and zero-emission vehicles replace older vehicles over time, Project-related mobile-source emissions and fuel consumption would decrease consistent with statewide regulatory requirements.

Consistency with Executive Order N-79-20 and Advanced Clean Cars II supports decreasing overall per capita energy consumption and reducing reliance on fossil fuels, consistent with State CEQA Guidelines Appendix F, as vehicle electrification and improved fuel economy standards would reduce gasoline consumption and associated energy demand over the life of the Project.

### Consistency with City of Riverside Restorative Growthprint (RRG) Climate Action Plan (CAP)

The City of Riverside adopted the Riverside Restorative Growthprint (RRG) Climate Action Plan (CAP), building upon the Western Riverside Council of Governments (WRCOG) Subregional CAP framework to establish local greenhouse gas reduction targets through 2035. While the RRG CAP is not a qualified greenhouse gas reduction plan under CEQA Guidelines Section 15183.5, it identifies numerous strategies intended to reduce community-wide energy use and associated emissions.

The Energy sector of the RRG CAP promotes energy-efficient building design, appliance standards, renewable energy systems (such as solar photovoltaic installations), and electrification of buildings and vehicles to reduce dependence on fossil fuels and enhance local energy resilience. The Project would be designed and constructed in accordance with applicable Title 24 energy efficiency standards and would incorporate energy-efficient building systems consistent with State and local requirements. Additionally, the Project would utilize electricity supplied by Riverside Public Utilities (RPU), which is progressively increasing its renewable energy portfolio in accordance with statewide mandates.

The Project would not conflict with, nor obstruct implementation of, the goals and strategies identified in the RRG CAP.

Consistency with the City of Riverside RRG CAP supports decreasing overall per capita energy consumption, decreasing reliance on fossil fuels, and increasing reliance on renewable energy sources, consistent with State CEQA Guidelines Appendix F.

As shown above, the Project would not conflict with any of the state or local plans. As such, a less than significant impact is expected.

### Consistency with CEQA Appendix F

As supported in the preceding sections, the Project would achieve the goals of energy conservation as identified in Appendix F of the *State CEQA Guidelines.* The Project would decrease overall per capita energy consumption by being consistent with the ISTEA, TEA-21, 2024 IEPR, State of California Energy Plan, and Title 24 Standards. The Project would decrease reliance on fossil fuels such as coal, natural gas and oil by being consistent with the ISTEA, TEA-21, 2024 IEPR, State of California Energy Plan, Title 24 Standards and AB 1493. The Project would increase reliance on renewable energy sources by being consistent with the 2024 IEPR, Title 24 Standards, RPS and SB 350. Compliance with the aforementioned mandatory measures would ensure that the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

As such, based on the preceding discussion and supporting evidence, a less than significant impact is expected with respect to CEQA Guidelines Appendix F criteria.

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# 7 CERTIFICATION

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Independence at Canyon Springs Project. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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Bachelor of Arts in Environmental Analysis and Design
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AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

### Professional Certifications

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – CARB • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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# APPENDIX 4.1:

# CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

# 16503 - Independence at Canyon Springs Detailed Report

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7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 16503 - Independence at Canyon Springs |
| Construction Start Date | 1/1/2027 |
| Operational Year | 2028 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.50 |
| Precipitation (days) | 10.0 |
| Location | 33.935687, -117.283232 |
| County | Riverside-South Coast |
| City | Riverside |
| Air District | South Coast AQMD |
| Air Basin | South Coast |
| TAZ | 5531 |
| EDFZ | 11 |
| Electric Utility | City of Riverside |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.30 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 156 | Dwelling Unit | 5.29 | 225,321 | 1,827,206 | — | 504 | — |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Parking Lot | 369 | Space | 1.37 | 0.00 | 0.00 | — | — | — |
| Other Asphalt Surfaces | 2.44 | Acre | 2.44 | 0.00 | 0.00 | — | — | — |
| Recreational Swimming Pool | 1.19 | 1000sqft | 0.03 | 1,190 | 0.00 | — | — | — |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 7.51 | 6.93 | 30.2 | 39.5 | 0.06 | 1.23 | 1.83 | 2.79 | 1.13 | 0.44 | 1.42 | — | 7,446 | 7,446 | 0.26 | 0.22 | 7.26 | 7,506 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 8.61 | 7.14 | 64.4 | 66.1 | 0.15 | 2.95 | 5.32 | 8.28 | 2.73 | 1.64 | 4.37 | — | 18,674 | 18,674 | 0.61 | 1.07 | 0.37 | 19,007 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.43 | 3.10 | 14.7 | 18.5 | 0.03 | 0.59 | 0.97 | 1.56 | 0.55 | 0.25 | 0.79 | — | 3,995 | 3,995 | 0.13 | 0.14 | 1.55 | 4,041 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.63 | 0.57 | 2.68 | 3.38 | 0.01 | 0.11 | 0.18 | 0.29 | 0.10 | 0.05 | 0.14 | — | 661 | 661 | 0.02 | 0.02 | 0.26 | 669 |

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 7.51 | 6.93 | 30.2 | 39.5 | 0.06 | 1.23 | 1.83 | 2.79 | 1.13 | 0.44 | 1.42 | — | 7,446 | 7,446 | 0.26 | 0.22 | 7.26 | 7,506 |
| 2028 | 4.26 | 4.20 | 1.74 | 5.15 | 0.01 | 0.03 | 0.88 | 0.91 | 0.03 | 0.21 | 0.24 | — | 1,393 | 1,393 | 0.02 | 0.10 | 3.23 | 1,426 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 8.61 | 7.14 | 64.4 | 66.1 | 0.15 | 2.95 | 5.32 | 8.28 | 2.73 | 1.64 | 4.37 | — | 18,674 | 18,674 | 0.61 | 1.07 | 0.37 | 19,007 |
| 2028 | 4.23 | 4.18 | 1.79 | 4.30 | 0.01 | 0.03 | 0.88 | 0.91 | 0.03 | 0.21 | 0.24 | — | 1,333 | 1,333 | 0.02 | 0.10 | 0.08 | 1,363 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 3.43 | 3.10 | 14.7 | 18.5 | 0.03 | 0.59 | 0.97 | 1.56 | 0.55 | 0.25 | 0.79 | — | 3,995 | 3,995 | 0.13 | 0.14 | 1.55 | 4,041 |
| 2028 | 2.50 | 2.47 | 1.06 | 2.62 | < 0.005 | 0.02 | 0.52 | 0.53 | 0.02 | 0.12 | 0.14 | — | 793 | 793 | 0.01 | 0.06 | 0.82 | 811 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 0.63 | 0.57 | 2.68 | 3.38 | 0.01 | 0.11 | 0.18 | 0.29 | 0.10 | 0.05 | 0.14 | — | 661 | 661 | 0.02 | 0.02 | 0.26 | 669 |
| 2028 | 0.46 | 0.45 | 0.19 | 0.48 | < 0.005 | < 0.005 | 0.09 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 131 | 131 | < 0.005 | 0.01 | 0.14 | 134 |

## 2.4. Operations Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 12.3 | 11.5 | 9.33 | 61.7 | 0.16 | 0.42 | 12.6 | 13.0 | 0.41 | 3.20 | 3.61 | 92.9 | 21,310 | 21,403 | 10.2 | 0.65 | 42.3 | 21,895 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 11.2 | 10.4 | 9.62 | 44.3 | 0.16 | 0.42 | 12.6 | 13.0 | 0.41 | 3.20 | 3.61 | 92.9 | 20,424 | 20,517 | 10.2 | 0.67 | 2.51 | 20,976 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 10.6 | 10.0 | 6.49 | 44.1 | 0.12 | 0.21 | 10.6 | 10.8 | 0.21 | 2.69 | 2.90 | 92.9 | 15,448 | 15,541 | 10.1 | 0.58 | 16.4 | 15,981 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.94 | 1.83 | 1.19 | 8.05 | 0.02 | 0.04 | 1.93 | 1.97 | 0.04 | 0.49 | 0.53 | 15.4 | 2,558 | 2,573 | 1.67 | 0.10 | 2.71 | 2,646 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 5.82 | 5.29 | 5.25 | 51.1 | 0.14 | 0.09 | 12.6 | 12.7 | 0.09 | 3.20 | 3.29 | — | 14,175 | 14,175 | 0.50 | 0.60 | 40.8 | 14,406 |
| Area | 6.35 | 6.16 | 2.67 | 9.97 | 0.02 | 0.21 | — | 0.21 | 0.21 | — | 0.21 | 0.00 | 3,308 | 3,308 | 0.06 | 0.01 | — | 3,312 |
| Energy | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 3,554 | 3,554 | 0.29 | 0.02 | — | 3,568 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 12.3 | 273 | 285 | 1.28 | 0.03 | — | 327 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 80.7 | 0.00 | 80.7 | 8.06 | 0.00 | — | 282 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.45 | 1.45 |
| Total | 12.3 | 11.5 | 9.33 | 61.7 | 0.16 | 0.42 | 12.6 | 13.0 | 0.41 | 3.20 | 3.61 | 92.9 | 21,310 | 21,403 | 10.2 | 0.65 | 42.3 | 21,895 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 5.51 | 4.98 | 5.63 | 42.6 | 0.13 | 0.10 | 12.6 | 12.7 | 0.09 | 3.20 | 3.29 | — | 13,313 | 13,313 | 0.51 | 0.62 | 1.06 | 13,510 |
| Area | 5.54 | 5.39 | 2.59 | 1.10 | 0.02 | 0.21 | — | 0.21 | 0.21 | — | 0.21 | 0.00 | 3,285 | 3,285 | 0.06 | 0.01 | — | 3,288 |
| Energy | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 3,554 | 3,554 | 0.29 | 0.02 | — | 3,568 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 12.3 | 273 | 285 | 1.28 | 0.03 | — | 327 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 80.7 | 0.00 | 80.7 | 8.06 | 0.00 | — | 282 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.45 | 1.45 |
| Total | 11.2 | 10.4 | 9.62 | 44.3 | 0.16 | 0.42 | 12.6 | 13.0 | 0.41 | 3.20 | 3.61 | 92.9 | 20,424 | 20,517 | 10.2 | 0.67 | 2.51 | 20,976 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 4.63 | 4.18 | 4.86 | 37.4 | 0.11 | 0.08 | 10.6 | 10.7 | 0.08 | 2.69 | 2.77 | — | 11,380 | 11,380 | 0.44 | 0.53 | 14.9 | 11,562 |
| Area | 5.81 | 5.77 | 0.23 | 6.15 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | 0.00 | 241 | 241 | < 0.005 | < 0.005 | — | 241 |
| Energy | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 3,554 | 3,554 | 0.29 | 0.02 | — | 3,568 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 12.3 | 273 | 285 | 1.28 | 0.03 | — | 327 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 80.7 | 0.00 | 80.7 | 8.06 | 0.00 | — | 282 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.45 | 1.45 |
| Total | 10.6 | 10.0 | 6.49 | 44.1 | 0.12 | 0.21 | 10.6 | 10.8 | 0.21 | 2.69 | 2.90 | 92.9 | 15,448 | 15,541 | 10.1 | 0.58 | 16.4 | 15,981 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.85 | 0.76 | 0.89 | 6.82 | 0.02 | 0.01 | 1.93 | 1.95 | 0.01 | 0.49 | 0.50 | — | 1,884 | 1,884 | 0.07 | 0.09 | 2.47 | 1,914 |
| Area | 1.06 | 1.05 | 0.04 | 1.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 39.9 | 39.9 | < 0.005 | < 0.005 | — | 40.0 |
| Energy | 0.03 | 0.01 | 0.26 | 0.11 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 588 | 588 | 0.05 | < 0.005 | — | 591 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 2.04 | 45.1 | 47.2 | 0.21 | 0.01 | — | 54.1 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 13.4 | 0.00 | 13.4 | 1.33 | 0.00 | — | 46.7 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.24 | 0.24 |
| Total | 1.94 | 1.83 | 1.19 | 8.05 | 0.02 | 0.04 | 1.93 | 1.97 | 0.04 | 0.49 | 0.53 | 15.4 | 2,558 | 2,573 | 1.67 | 0.10 | 2.71 | 2,646 |

# 3. Construction Emissions Details

## 3.1. Site Preparation and Grading (2027) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 4.94 | 4.15 | 33.6 | 37.0 | 0.07 | 1.82 | — | 1.82 | 1.67 | — | 1.67 | — | 7,548 | 7,548 | 0.31 | 0.06 | — | 7,574 |
| Dust From Material Movement | — | — | — | — | — | — | 2.95 | 2.95 | — | 1.01 | 1.01 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Roa d Equipm ent | 0.20 | 0.17 | 1.38 | 1.52 | < 0.005 | 0.07 | — | 0.07 | 0.07 | — | 0.07 | — | 310 | 310 | 0.01 | < 0.005 | — | 311 |
| Dust From Material Movement | — | — | — | — | — | — | 0.12 | 0.12 | — | 0.04 | 0.04 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Roa d Equipm ent | 0.04 | 0.03 | 0.25 | 0.28 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 51.4 | 51.4 | < 0.005 | < 0.005 | — | 51.5 |
| Dust From Material Movement | — | — | — | — | — | — | 0.02 | 0.02 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.12 | 0.13 | 1.63 | 0.00 | 0.00 | 0.42 | 0.42 | 0.00 | 0.10 | 0.10 | — | 405 | 405 | 0.01 | 0.02 | 0.04 | 409 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.6 | 29.6 | < 0.005 | < 0.005 | < 0.005 | 30.9 |
| Hauling | 0.24 | 0.09 | 6.44 | 1.55 | 0.04 | 0.11 | 1.54 | 1.65 | 0.11 | 0.43 | 0.54 | — | 5,647 | 5,647 | 0.11 | 0.88 | 0.28 | 5,913 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 16.8 | 16.8 | < 0.005 | < 0.005 | 0.02 | 17.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.21 | 1.21 | < 0.005 | < 0.005 | < 0.005 | 1.27 |
| Hauling | 0.01 | < 0.005 | 0.27 | 0.06 | < 0.005 | < 0.005 | 0.06 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 232 | 232 | < 0.005 | 0.04 | 0.19 | 243 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.79 | 2.79 | < 0.005 | < 0.005 | < 0.005 | 2.82 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.20 | 0.20 | < 0.005 | < 0.005 | < 0.005 | 0.21 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 38.4 | 38.4 | < 0.005 | 0.01 | 0.03 | 40.2 |

## 3.3. Foundation (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.70 | 0.59 | 5.63 | 9.35 | 0.01 | 0.20 | — | 0.20 | 0.18 | — | 0.18 | — | 1,432 | 1,432 | 0.06 | 0.01 | — | 1,437 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 0.70 | 0.59 | 5.63 | 9.35 | 0.01 | 0.20 | — | 0.20 | 0.18 | — | 0.18 | — | 1,432 | 1,432 | 0.06 | 0.01 | — | 1,437 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Roa d Equipm ent | 0.28 | 0.24 | 2.27 | 3.77 | 0.01 | 0.08 | — | 0.08 | 0.07 | — | 0.07 | — | 577 | 577 | 0.02 | < 0.005 | — | 579 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Roa d Equipm ent | 0.05 | 0.04 | 0.41 | 0.69 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 95.5 | 95.5 | < 0.005 | < 0.005 | — | 95.8 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.26 | 0.23 | 0.20 | 3.76 | 0.00 | 0.00 | 0.74 | 0.74 | 0.00 | 0.17 | 0.17 | — | 767 | 767 | 0.01 | 0.03 | 2.38 | 778 |
| Vendor | 0.01 | < 0.005 | 0.19 | 0.06 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 177 | 177 | < 0.005 | 0.03 | 0.45 | 186 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.21 | 0.22 | 2.84 | 0.00 | 0.00 | 0.74 | 0.74 | 0.00 | 0.17 | 0.17 | — | 705 | 705 | 0.01 | 0.03 | 0.06 | 714 |
| Vendor | 0.01 | < 0.005 | 0.19 | 0.06 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 177 | 177 | < 0.005 | 0.03 | 0.01 | 185 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.10 | 0.09 | 0.10 | 1.20 | 0.00 | 0.00 | 0.30 | 0.30 | 0.00 | 0.07 | 0.07 | — | 288 | 288 | < 0.005 | 0.01 | 0.41 | 291 |
| Vendor | < 0.005 | < 0.005 | 0.08 | 0.02 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 71.4 | 71.4 | < 0.005 | 0.01 | 0.08 | 74.7 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.22 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.01 | 0.01 | — | 47.6 | 47.6 | < 0.005 | < 0.005 | 0.07 | 48.2 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 11.8 | 11.8 | < 0.005 | < 0.005 | 0.01 | 12.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.5. Curb & Gutter and Paving (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.88 | 0.74 | 6.94 | 9.95 | 0.01 | 0.30 | — | 0.30 | 0.27 | — | 0.27 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.88 | 0.74 | 6.94 | 9.95 | 0.01 | 0.30 | — | 0.30 | 0.27 | — | 0.27 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | 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 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.29 | 0.24 | 2.26 | 3.24 | < 0.005 | 0.10 | — | 0.10 | 0.09 | — | 0.09 | — | 493 | 493 | 0.02 | < 0.005 | — | 494 |
| Paving | 0.03 | 0.03 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.41 | 0.59 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 81.6 | 81.6 | < 0.005 | < 0.005 | — | 81.8 |
| Paving | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 1.00 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 203 | 203 | < 0.005 | 0.01 | 0.63 | 206 |
| Vendor | 0.01 | < 0.005 | 0.15 | 0.05 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 148 | 148 | < 0.005 | 0.02 | 0.38 | 155 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.06 | 0.06 | 0.75 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 187 | 187 | < 0.005 | 0.01 | 0.02 | 189 |
| Vendor | 0.01 | < 0.005 | 0.16 | 0.05 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 148 | 148 | < 0.005 | 0.02 | 0.01 | 155 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.26 | 0.00 | 0.00 | 0.06 | 0.06 | 0.00 | 0.01 | 0.01 | — | 61.7 | 61.7 | < 0.005 | < 0.005 | 0.09 | 62.5 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 48.2 | 48.2 | < 0.005 | 0.01 | 0.05 | 50.4 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 10.2 | 10.2 | < 0.005 | < 0.005 | 0.01 | 10.3 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.98 | 7.98 | < 0.005 | < 0.005 | 0.01 | 8.35 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.7. Framing and Architectural Coating (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.11 | 1.50 | < 0.005 | 0.03 | — | 0.03 | 0.02 | — | 0.02 | — | 178 | 178 | 0.01 | < 0.005 | — | 179 |
| Architectural Coatings | 3.82 | 3.82 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.11 | 1.50 | < 0.005 | 0.03 | — | 0.03 | 0.02 | — | 0.02 | — | 178 | 178 | 0.01 | < 0.005 | — | 179 |
| Architectural Coatings | 3.82 | 3.82 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.05 | 0.39 | 0.52 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 62.0 | 62.0 | < 0.005 | < 0.005 | — | 62.2 |
| Architectural Coatings | 1.33 | 1.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.07 | 0.10 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.3 | 10.3 | < 0.005 | < 0.005 | — | 10.3 |
| Architectural Coatings | 0.24 | 0.24 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.26 | 0.23 | 0.20 | 3.76 | 0.00 | 0.00 | 0.74 | 0.74 | 0.00 | 0.17 | 0.17 | — | 767 | 767 | 0.01 | 0.03 | 2.38 | 778 |
| Vendor | 0.02 | 0.01 | 0.49 | 0.16 | < 0.005 | 0.01 | 0.14 | 0.14 | 0.01 | 0.04 | 0.05 | — | 473 | 473 | 0.01 | 0.07 | 1.20 | 495 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.21 | 0.22 | 2.84 | 0.00 | 0.00 | 0.74 | 0.74 | 0.00 | 0.17 | 0.17 | — | 705 | 705 | 0.01 | 0.03 | 0.06 | 714 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.02 | 0.01 | 0.52 | 0.16 | < 0.005 | 0.01 | 0.14 | 0.14 | 0.01 | 0.04 | 0.05 | — | 473 | 473 | 0.01 | 0.07 | 0.03 | 495 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.08 | 0.07 | 0.09 | 1.04 | 0.00 | 0.00 | 0.26 | 0.26 | 0.00 | 0.06 | 0.06 | — | 249 | 249 | < 0.005 | 0.01 | 0.36 | 252 |
| Vendor | 0.01 | < 0.005 | 0.18 | 0.05 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 165 | 165 | < 0.005 | 0.02 | 0.18 | 172 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.01 | 0.02 | 0.19 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.01 | 0.01 | — | 41.2 | 41.2 | < 0.005 | < 0.005 | 0.06 | 41.7 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | 0.03 | 28.5 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.9. Framing and Architectural Coating (2028) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.14 | 1.08 | 1.49 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 178 | 178 | 0.01 | < 0.005 | — | 179 |
| Architectural Coatings | 3.82 | 3.82 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 0.17 | 0.14 | 1.08 | 1.49 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 178 | 178 | 0.01 | < 0.005 | — | 179 |
| Architectural Coatings | 3.82 | 3.82 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.08 | 0.64 | 0.88 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 105 | 105 | < 0.005 | < 0.005 | — | 106 |
| Architectural Coatings | 2.26 | 2.26 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.12 | 0.16 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 17.4 | 17.4 | < 0.005 | < 0.005 | — | 17.5 |
| Architectural Coatings | 0.41 | 0.41 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.25 | 0.22 | 0.20 | 3.51 | 0.00 | 0.00 | 0.74 | 0.74 | 0.00 | 0.17 | 0.17 | — | 753 | 753 | 0.01 | 0.03 | 2.13 | 763 |
| Vendor | 0.02 | 0.01 | 0.47 | 0.15 | < 0.005 | 0.01 | 0.14 | 0.14 | 0.01 | 0.04 | 0.05 | — | 462 | 462 | 0.01 | 0.07 | 1.10 | 485 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.21 | 0.21 | 0.22 | 2.65 | 0.00 | 0.00 | 0.74 | 0.74 | 0.00 | 0.17 | 0.17 | — | 692 | 692 | 0.01 | 0.03 | 0.06 | 701 |
| Vendor | 0.02 | 0.01 | 0.49 | 0.16 | < 0.005 | 0.01 | 0.14 | 0.14 | 0.01 | 0.04 | 0.05 | — | 462 | 462 | 0.01 | 0.07 | 0.03 | 484 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.12 | 0.12 | 0.13 | 1.65 | 0.00 | 0.00 | 0.43 | 0.43 | 0.00 | 0.10 | 0.10 | — | 414 | 414 | 0.01 | 0.02 | 0.54 | 420 |
| Vendor | 0.01 | 0.01 | 0.29 | 0.09 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.02 | 0.03 | — | 273 | 273 | < 0.005 | 0.04 | 0.28 | 286 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.30 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 68.6 | 68.6 | < 0.005 | < 0.005 | 0.09 | 69.5 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.02 | < 0.005 | < 0.005 | < 0.005 | — | 45.2 | 45.2 | < 0.005 | 0.01 | 0.05 | 47.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.11. On-Site Wet and Dry Utilities (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.22 | 1.87 | 16.8 | 14.8 | 0.03 | 0.72 | — | 0.72 | 0.67 | — | 0.67 | — | 2,899 | 2,899 | 0.12 | 0.02 | — | 2,909 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.22 | 1.87 | 16.8 | 14.8 | 0.03 | 0.72 | — | 0.72 | 0.67 | — | 0.67 | — | 2,899 | 2,899 | 0.12 | 0.02 | — | 2,909 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.99 | 0.83 | 7.46 | 6.56 | 0.01 | 0.32 | — | 0.32 | 0.30 | — | 0.30 | — | 1,287 | 1,287 | 0.05 | 0.01 | — | 1,291 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.36 | 1.20 | < 0.005 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 213 | 213 | 0.01 | < 0.005 | — | 214 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.50 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 102 | 102 | < 0.005 | < 0.005 | 0.32 | 103 |
| Vendor | 0.01 | < 0.005 | 0.22 | 0.07 | < 0.005 | < 0.005 | 0.06 | 0.06 | < 0.005 | 0.02 | 0.02 | — | 207 | 207 | < 0.005 | 0.03 | 0.53 | 217 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.38 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 93.4 | 93.4 | < 0.005 | < 0.005 | 0.01 | 94.5 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.01 | < 0.005 | 0.23 | 0.07 | < 0.005 | < 0.005 | 0.06 | 0.06 | < 0.005 | 0.02 | 0.02 | — | 207 | 207 | < 0.005 | 0.03 | 0.01 | 216 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.18 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 42.0 | 42.0 | < 0.005 | < 0.005 | 0.06 | 42.5 |
| Vendor | < 0.005 | < 0.005 | 0.10 | 0.03 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 91.8 | 91.8 | < 0.005 | 0.01 | 0.10 | 96.1 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 6.95 | 6.95 | < 0.005 | < 0.005 | 0.01 | 7.04 |
| Vendor | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 15.2 | 15.2 | < 0.005 | < 0.005 | 0.02 | 15.9 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 5.82 | 5.29 | 5.25 | 51.1 | 0.14 | 0.09 | 12.6 | 12.7 | 0.09 | 3.20 | 3.29 | — | 14,175 | 14,175 | 0.50 | 0.60 | 40.8 | 14,406 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recreational | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 5.82 | 5.29 | 5.25 | 51.1 | 0.14 | 0.09 | 12.6 | 12.7 | 0.09 | 3.20 | 3.29 | — | 14,175 | 14,175 | 0.50 | 0.60 | 40.8 | 14,406 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 5.51 | 4.98 | 5.63 | 42.6 | 0.13 | 0.10 | 12.6 | 12.7 | 0.09 | 3.20 | 3.29 | — | 13,313 | 13,313 | 0.51 | 0.62 | 1.06 | 13,510 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 5.51 | 4.98 | 5.63 | 42.6 | 0.13 | 0.10 | 12.6 | 12.7 | 0.09 | 3.20 | 3.29 | — | 13,313 | 13,313 | 0.51 | 0.62 | 1.06 | 13,510 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.85 | 0.76 | 0.89 | 6.82 | 0.02 | 0.01 | 1.93 | 1.95 | 0.01 | 0.49 | 0.50 | — | 1,884 | 1,884 | 0.07 | 0.09 | 2.47 | 1,914 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 0.85 | 0.76 | 0.89 | 6.82 | 0.02 | 0.01 | 1.93 | 1.95 | 0.01 | 0.49 | 0.50 | — | 1,884 | 1,884 | 0.07 | 0.09 | 2.47 | 1,914 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 1,715 | 1,715 | 0.13 | 0.02 | — | 1,723 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 61.5 | 61.5 | < 0.005 | < 0.005 | — | 61.8 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,776 | 1,776 | 0.14 | 0.02 | — | 1,785 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 1,715 | 1,715 | 0.13 | 0.02 | — | 1,723 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 61.5 | 61.5 | < 0.005 | < 0.005 | — | 61.8 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recreational Swimmi Pool | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,776 | 1,776 | 0.14 | 0.02 | — | 1,785 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 284 | 284 | 0.02 | < 0.005 | — | 285 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 10.2 | 10.2 | < 0.005 | < 0.005 | — | 10.2 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 294 | 294 | 0.02 | < 0.005 | — | 295 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,778 | 1,778 | 0.16 | < 0.005 | — | 1,783 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recreati Swimming Pool | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,778 | 1,778 | 0.16 | < 0.005 | — | 1,783 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,778 | 1,778 | 0.16 | < 0.005 | — | 1,783 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.16 | 0.08 | 1.40 | 0.60 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,778 | 1,778 | 0.16 | < 0.005 | — | 1,783 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.03 | 0.01 | 0.26 | 0.11 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 294 | 294 | 0.03 | < 0.005 | — | 295 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.03 | 0.01 | 0.26 | 0.11 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 294 | 294 | 0.03 | < 0.005 | — | 295 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.30 | 0.15 | 2.59 | 1.10 | 0.02 | 0.21 | — | 0.21 | 0.21 | — | 0.21 | 0.00 | 3,285 | 3,285 | 0.06 | 0.01 | — | 3,288 |
| Consumer Products | 4.83 | 4.83 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.40 | 0.40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.81 | 0.77 | 0.08 | 8.87 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.7 | 23.7 | < 0.005 | < 0.005 | — | 23.7 |
| Total | 6.35 | 6.16 | 2.67 | 9.97 | 0.02 | 0.21 | — | 0.21 | 0.21 | — | 0.21 | 0.00 | 3,308 | 3,308 | 0.06 | 0.01 | — | 3,312 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.30 | 0.15 | 2.59 | 1.10 | 0.02 | 0.21 | — | 0.21 | 0.21 | — | 0.21 | 0.00 | 3,285 | 3,285 | 0.06 | 0.01 | — | 3,288 |
| Consumer Products | 4.83 | 4.83 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.40 | 0.40 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 5.54 | 5.39 | 2.59 | 1.10 | 0.02 | 0.21 | — | 0.21 | 0.21 | — | 0.21 | 0.00 | 3,285 | 3,285 | 0.06 | 0.01 | — | 3,288 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 37.2 | 37.2 | < 0.005 | < 0.005 | — | 37.3 |
| Consumer Products | 0.88 | 0.88 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.07 | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.10 | 0.10 | 0.01 | 1.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.68 | 2.68 | < 0.005 | < 0.005 | — | 2.69 |
| Total | 1.06 | 1.05 | 0.04 | 1.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 39.9 | 39.9 | < 0.005 | < 0.005 | — | 40.0 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 12.2 | 272 | 284 | 1.27 | 0.03 | — | 325 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recreational Swimmi Pool | — | — | — | — | — | — | — | — | — | — | — | 0.13 | 0.56 | 0.70 | 0.01 | < 0.005 | — | 1.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 12.3 | 273 | 285 | 1.28 | 0.03 | — | 327 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 12.2 | 272 | 284 | 1.27 | 0.03 | — | 325 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | 0.13 | 0.56 | 0.70 | 0.01 | < 0.005 | — | 1.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 12.3 | 273 | 285 | 1.28 | 0.03 | — | 327 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 2.01 | 45.0 | 47.0 | 0.21 | 0.01 | — | 53.9 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | 0.02 | 0.09 | 0.12 | < 0.005 | < 0.005 | — | 0.19 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.04 | 45.1 | 47.2 | 0.21 | 0.01 | — | 54.1 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 77.0 | 0.00 | 77.0 | 7.70 | 0.00 | — | 269 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | 3.66 | 0.00 | 3.66 | 0.37 | 0.00 | — | 12.8 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 80.7 | 0.00 | 80.7 | 8.06 | 0.00 | — | 282 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 77.0 | 0.00 | 77.0 | 7.70 | 0.00 | — | 269 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recreational Swimmi Pool | — | — | — | — | — | — | — | — | — | — | — | 3.66 | 0.00 | 3.66 | 0.37 | 0.00 | — | 12.8 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 80.7 | 0.00 | 80.7 | 8.06 | 0.00 | — | 282 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 12.7 | 0.00 | 12.7 | 1.27 | 0.00 | — | 44.6 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | 0.61 | 0.00 | 0.61 | 0.06 | 0.00 | — | 2.12 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 13.4 | 0.00 | 13.4 | 1.33 | 0.00 | — | 46.7 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.44 | 1.44 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.45 | 1.45 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.44 | 1.44 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.45 | 1.45 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.24 | 0.24 |
| Recreational Swimming Pool | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.24 | 0.24 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

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

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Site Preparation and Grading | Grading | 1/1/2027 | 1/21/2027 | 5.00 | 15.0 | 10 |
| Foundation | Building Construction | 2/18/2027 | 9/10/2027 | 5.00 | 147 | 230 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Curb & Gutter and Paving | Paving | 1/21/2027 | 7/6/2027 | 5.00 | 119 | 20 |
| Framing and Architectural Coating | Building Construction | 7/7/2027 | 10/28/2028 | 5.00 | 381 | 20 |
| On-Site Wet and Dry Utilities | Trenching | 1/21/2027 | 9/3/2027 | 5.00 | 162 | 20 |

## 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 and Grading | Excavators | Diesel | Average | 1.00 | 8.00 | 36.0 | 0.38 |
| Site Preparation and Grading | Off-Highway Trucks | Diesel | Average | 2.00 | 8.00 | 376 | 0.38 |
| Site Preparation and Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Site Preparation and Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Site Preparation and Grading | Crawler Tractors | Diesel | Average | 8.00 | 8.00 | 87.0 | 0.43 |
| Foundation | Forklifts | Diesel | Average | 3.00 | 8.00 | 82.0 | 0.20 |
| Foundation | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Foundation | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 8.00 | 84.0 | 0.37 |
| Curb & Gutter and Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Curb & Gutter and Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Curb & Gutter and Paving | Rollers | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Framing and Architectural Coating | Air Compressors | Diesel | Average | 1.00 | 8.00 | 37.0 | 0.48 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| On-Site Wet and Dry Utilities | Rubber Tired Dozers | Diesel | Average | 2.00 | 8.00 | 367 | 0.40 |
| On-Site Wet and Dry Utilities | Excavators | Diesel | Average | 1.00 | 8.00 | 36.0 | 0.38 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation and Grading | — | — | — | — |
| Site Preparation and Grading | Worker | 32.5 | 18.5 | LDA,LDT1,LDT2 |
| Site Preparation and Grading | Vendor | 1.00 | 10.2 | HHDT,MHDT |
| Site Preparation and Grading | Hauling | 85.0 | 20.0 | HHDT |
| Site Preparation and Grading | Onsite truck | — | — | HHDT |
| On-Site Wet and Dry Utilities | — | — | — | — |
| On-Site Wet and Dry Utilities | Worker | 7.50 | 18.5 | LDA,LDT1,LDT2 |
| On-Site Wet and Dry Utilities | Vendor | 7.00 | 10.2 | HHDT,MHDT |
| On-Site Wet and Dry Utilities | Hauling | 0.00 | 20.0 | HHDT |
| On-Site Wet and Dry Utilities | Onsite truck | — | — | HHDT |
| Foundation | — | — | — | — |
| Foundation | Worker | 56.7 | 18.5 | LDA,LDT1,LDT2 |
| Foundation | Vendor | 6.00 | 10.2 | HHDT,MHDT |
| Foundation | Hauling | 0.00 | 20.0 | HHDT |
| Foundation | Onsite truck | — | — | HHDT |
| Curb & Gutter and Paving | — | — | — | — |
| Curb & Gutter and Paving | Worker | 15.0 | 18.5 | LDA,LDT1,LDT2 |
| Curb & Gutter and Paving | Vendor | 5.00 | 10.2 | HHDT,MHDT |
| Curb & Gutter and Paving | Hauling | 0.00 | 20.0 | HHDT |
| Curb & Gutter and Paving | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| Framing and Architectural Coating | — | — | — | — |
| Framing and Architectural Coating | Worker | 56.7 | 18.5 | LDA,LDT1,LDT2 |
| Framing and Architectural Coating | Vendor | 16.0 | 10.2 | HHDT,MHDT |
| Framing and Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Framing and 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) |
|---|---|---|---|---|---|
| Framing and Architectural Coating | 456,275 | 152,092 | 0.00 | 0.00 | 9,958 |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Site Preparation and Grading | 8,902 | — | 75.0 | 0.00 | — |
| Curb & Gutter and Paving | 0.00 | 0.00 | 0.00 | 0.00 | 5.53 |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 3 | 74% | 74% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Single Family Housing | 1.72 | 0% |
| Parking Lot | 1.37 | 100% |
| Other Asphalt Surfaces | 2.44 | 100% |
| Recreational Swimming Pool | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2027 | 0.00 | 439 | 0.03 | < 0.005 |
| 2028 | 0.00 | 430 | 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 |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 1,123 | 1,367 | 1,119 | 422,413 | 14,626 | 17,795 | 14,565 | 5,500,632 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recreational Swimming Pool | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

| Hearth Type | Unmitigated (number) |
|---|---|
| Single Family Housing | — |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 156 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 0 |

### 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) |
|---|---|---|---|---|
| 456275.02499999997 | 152,092 | 0.00 | 0.00 | 9,958 |

### 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) |
|---|---|---|---|---|---|
| Single Family Housing | 1,456,922 | 430 | 0.0330 | 0.0040 | 5,548,033 |
| Parking Lot | 52,277 | 430 | 0.0330 | 0.0040 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 430 | 0.0330 | 0.0040 | 0.00 |

| | | | | | |
|---|---|---|---|---|---|
| Recreational Swimming Pool | 0.00 | 430 | 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) |
|---|---|---|
| Single Family Housing | 6,345,109 | 35,409,795 |
| Parking Lot | 0.00 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 |
| Recreational Swimming Pool | 70,380 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Single Family Housing | 143 | — |
| Parking Lot | 0.00 | — |
| Other Asphalt Surfaces | 0.00 | — |
| Recreational Swimming Pool | 6.78 | — |

## 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 |
|---|---|---|---|---|---|---|---|
| Single Family Housing | Average room A/C & Other residential A/C and heat pumps | User Defined | 750 | < 0.005 | 2.50 | 2.50 | 10.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Single Family Housing | Household refrigerators and/or freezers | R-134a | 1,430 | 0.12 | 0.60 | 0.00 | 1.00 |
| Recreational Swimming Pool | Other commercial A/C and heat pumps | User Defined | 750 | < 0.005 | 4.00 | 4.00 | 18.0 |
| Recreational Swimming Pool | Stand-alone retail refrigerators and freezers | R-134a | 1,430 | 0.04 | 1.00 | 0.00 | 1.00 |

## 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 | 26.2 | annual days of extreme heat |
| Extreme Precipitation | 2.05 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 5.74 | 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 | 98.7 |
| AQ-PM | 64.4 |
| AQ-DPM | 63.8 |
| Drinking Water | 66.9 |
| Lead Risk Housing | 99.0 |
| Pesticides | 26.7 |
| Toxic Releases | 79.9 |
| Traffic | 84.3 |
| Effect Indicators | — |
| CleanUp Sites | 83.0 |
| Groundwater | 14.5 |
| Haz Waste Facilities/Generators | 57.5 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 66.7 |
| Sensitive Population | — |
| Asthma | 69.2 |

| | |
|---|---|
| Cardio-vascular | 84.9 |
| Low Birth Weights | 93.6 |
| Socioeconomic Factor Indicators | — |
| Education | 93.7 |
| Housing | 89.1 |
| Linguistic | 79.2 |
| Poverty | 98.0 |
| Unemployment | 98.1 |

## 7.2. Healthy Places Index Scores

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

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | — |
| Above Poverty | 4.067753112 |
| Employed | 10.67624791 |
| Median HI | 6.351854228 |
| Education | — |
| Bachelor's or higher | 5.504940331 |
| High school enrollment | 18.45245733 |
| Preschool enrollment | 9.547029385 |
| Transportation | — |
| Auto Access | 24.53483896 |
| Active commuting | 49.46747081 |
| Social | — |
| 2-parent households | 16.55331708 |
| Voting | 0.20531246 |
| Neighborhood | — |
| Alcohol availability | 38.88104709 |

| | |
|---|---|
| Park access | 28.17913512 |
| Retail density | 72.02617734 |
| Supermarket access | 45.07891698 |
| Tree canopy | 0.757089696 |
| Housing | — |
| Homeownership | 15.87321956 |
| Housing habitability | 7.570896959 |
| Low-inc homeowner severe housing cost burden | 48.33825228 |
| Low-inc renter severe housing cost burden | 4.311561658 |
| Uncrowded housing | 6.172205826 |
| Health Outcomes | — |
| Insured adults | 6.454510458 |
| Arthritis | 29.1 |
| Asthma ER Admissions | 33.3 |
| High Blood Pressure | 15.4 |
| Cancer (excluding skin) | 89.7 |
| Asthma | 2.1 |
| Coronary Heart Disease | 19.3 |
| Chronic Obstructive Pulmonary Disease | 4.4 |
| Diagnosed Diabetes | 9.0 |
| Life Expectancy at Birth | 80.6 |
| Cognitively Disabled | 62.4 |
| Physically  Disabled | 43.7 |
| Heart Attack ER Admissions | 40.6 |
| Mental Health Not Good | 1.3 |
| Chronic Kidney Disease | 10.6 |
| Obesity | 0.5 |
| Pedestrian Injuries | 78.3 |

| | |
|---|---|
| Physical Health Not Good | 1.5 |
| Stroke | 11.3 |
| Health Risk Behaviors | — |
| Binge Drinking | 85.2 |
| Current Smoker | 1.2 |
| No Leisure Time for Physical Activity | 1.1 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 1.2 |
| Elderly | 96.7 |
| English Speaking | 23.5 |
| Foreign-born | 67.9 |
| Outdoor Workers | 17.3 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 88.6 |
| Traffic Density | 83.2 |
| Traffic Access | 55.9 |
| Other Indices | — |
| Hardship | 97.3 |
| Other Decision Support | — |
| 2016 Voting | 2.4 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 99.0 |
| Healthy Places Index Score for Project Location (b) | 1.00 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | Yes |

| | |
|---|---|
| Project Located in a Low-Income Community (Assembly Bill 1550) | Yes |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

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

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Land Use | Total Project site is 9.13 acres. |
| Construction: Construction Phases | Schedule based on client provided data and based on the 2028 OY. |
| Operations: Vehicle Data | Based on information provided in the trip generation. |
| Construction: Off-Road Equipment | T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days. |
| Construction: Trips and VMT | Vendor Trips adjusted based on CalEEMod defaults for all phases<br>Hauling trips for grading adjusted based on Project specific information of 14 cy/truck capacity |
| Operations: Hearths | SCAQMD Rule 445 no wood burning devices. Wood burning devices added to gas devices. |
| Operations: Refrigerants | Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater. |

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# APPENDIX 4.2:

# EMFAC2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units:  miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

| Region | CalYr | VehClass | MdlYr | Speed | Fuel | Population | VMT | Fuel_Consumption | Fuel_Consumption | Total Fuel | VMT | Total VMT | Miles per Gallon | Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside (SC) | 2027 | HHDT | Aggregate | Aggregate | Gasoline | 4.417589037 | 240.8696114 | 0.059741457 | 59.74145741 | 327553.1219 | 240.8696114 | 2112996.232 | 6.45 | HHDT |
| Riverside (SC) | 2027 | HHDT | Aggregate | Aggregate | Diesel | 16021.09962 | 2023648.424 | 318.6419902 | 318641.9902 | | 2023648.424 | | | |
| Riverside (SC) | 2027 | HHDT | Aggregate | Aggregate | Electricity | 291.1277388 | 33695.26576 | 0 | 0 | | 33695.26576 | | | |
| Riverside (SC) | 2027 | HHDT | Aggregate | Aggregate | Natural Gas | 859.7365707 | 55411.6726 | 8.851390205 | 8851.390205 | | 55411.6726 | | | |
| Riverside (SC) | 2027 | LDA | Aggregate | Aggregate | Gasoline | 471235.7168 | 20354484.89 | 646.3182298 | 646318.2298 | 659332.1669 | 20354484.89 | 22605957.54 | 34.29 | LDA |
| Riverside (SC) | 2027 | LDA | Aggregate | Aggregate | Diesel | 1176.545459 | 41562.34596 | 0.941772786 | 941.772786 | | 41562.34596 | | | |
| Riverside (SC) | 2027 | LDA | Aggregate | Aggregate | Electricity | 30348.88532 | 1428770.722 | 0 | 0 | | 1428770.722 | | | |
| Riverside (SC) | 2027 | LDA | Aggregate | Aggregate | Plug-in Hybric | 16056.71591 | 781139.586 | 12.07216427 | 12072.16427 | | 781139.586 | | | |
| Riverside (SC) | 2027 | LDT1 | Aggregate | Aggregate | Gasoline | 38425.04641 | 1456606.871 | 56.00411545 | 56004.11545 | 56110.21758 | 1456606.871 | 1471112.371 | 26.22 | LDT1 |
| Riverside (SC) | 2027 | LDT1 | Aggregate | Aggregate | Diesel | 8.182997029 | 149.5948697 | 0.005861932 | 5.861931679 | | 149.5948697 | | | |
| Riverside (SC) | 2027 | LDT1 | Aggregate | Aggregate | Electricity | 147.7776311 | 7209.101259 | 0 | 0 | | 7209.101259 | | | |
| Riverside (SC) | 2027 | LDT1 | Aggregate | Aggregate | Plug-in Hybric | 130.963565 | 7146.803489 | 0.100240199 | 100.2401989 | | 7146.803489 | | | |
| Riverside (SC) | 2027 | LDT2 | Aggregate | Aggregate | Gasoline | 212339.9735 | 9414153.484 | 360.272054 | 360272.054 | 363211.8816 | 9414153.484 | 9671400.198 | 26.63 | LDT2 |
| Riverside (SC) | 2027 | LDT2 | Aggregate | Aggregate | Diesel | 713.6192887 | 33073.61643 | 0.942826085 | 942.8260853 | | 33073.61643 | | | |
| Riverside (SC) | 2027 | LDT2 | Aggregate | Aggregate | Electricity | 2564.171691 | 88062.50525 | 0 | 0 | | 88062.50525 | | | |
| Riverside (SC) | 2027 | LDT2 | Aggregate | Aggregate | Plug-in Hybric | 2628.969244 | 136110.5925 | 1.997001514 | 1997.001514 | | 136110.5925 | | | |
| Riverside (SC) | 2027 | LHDT1 | Aggregate | Aggregate | Gasoline | 17212.0897 | 642894.8546 | 44.12357644 | 44123.57644 | 69419.14823 | 642894.8546 | 1201022.641 | 17.30 | LHDT1 |
| Riverside (SC) | 2027 | LHDT1 | Aggregate | Aggregate | Diesel | 14633.12771 | 526713.4197 | 25.29557179 | 25295.57179 | | 526713.4197 | | | |
| Riverside (SC) | 2027 | LHDT1 | Aggregate | Aggregate | Electricity | 492.5286755 | 31414.36647 | 0 | 0 | | 31414.36647 | | | |
| Riverside (SC) | 2027 | LHDT2 | Aggregate | Aggregate | Gasoline | 2393.256129 | 85530.68603 | 6.657949773 | 6657.949773 | 20539.98243 | 85530.68603 | 334771.945 | 16.30 | LHDT2 |
| Riverside (SC) | 2027 | LHDT2 | Aggregate | Aggregate | Diesel | 6722.419556 | 241624.1987 | 13.88203265 | 13882.03265 | | 241624.1987 | | | |
| Riverside (SC) | 2027 | LHDT2 | Aggregate | Aggregate | Electricity | 125.2869519 | 7617.060264 | 0 | 0 | | 7617.060264 | | | |
| Riverside (SC) | 2027 | MCY | Aggregate | Aggregate | Gasoline | 23872.84416 | 135933.3741 | 3.223711537 | 3223.711537 | 3223.711537 | 135933.3741 | 135933.3741 | 42.17 | MCY |
| Riverside (SC) | 2027 | MDV | Aggregate | Aggregate | Gasoline | 157494.1298 | 6421344.406 | 307.9749594 | 307974.9594 | 313073.5241 | 6421344.406 | 6696600.902 | 21.39 | MDV |
| Riverside (SC) | 2027 | MDV | Aggregate | Aggregate | Diesel | 2354.829343 | 94400.81381 | 3.800171132 | 3800.171132 | | 94400.81381 | | | |
| Riverside (SC) | 2027 | MDV | Aggregate | Aggregate | Electricity | 2779.433972 | 95116.63714 | 0 | 0 | | 95116.63714 | | | |
| Riverside (SC) | 2027 | MDV | Aggregate | Aggregate | Plug-in Hybric | 1757.393907 | 85739.04462 | 1.298393545 | 1298.393545 | | 85739.04462 | | | |
| Riverside (SC) | 2027 | MH | Aggregate | Aggregate | Gasoline | 4014.402617 | 34124.53465 | 6.984241305 | 6984.241305 | 8533.923074 | 34124.53465 | 50163.52077 | 5.88 | MH |
| Riverside (SC) | 2027 | MH | Aggregate | Aggregate | Diesel | 1945.315043 | 16038.98612 | 1.549681769 | 1549.681769 | | 16038.98612 | | | |
| Riverside (SC) | 2027 | MHDT | Aggregate | Aggregate | Gasoline | 1187.040113 | 49189.22554 | 9.102215369 | 9102.215369 | 74108.25298 | 49189.22554 | 657629.6251 | 8.87 | MHDT |
| Riverside (SC) | 2027 | MHDT | Aggregate | Aggregate | Diesel | 13823.92114 | 580928.627 | 64.04015234 | 64040.15234 | | 580928.627 | | | |
| Riverside (SC) | 2027 | MHDT | Aggregate | Aggregate | Electricity | 371.8319942 | 18951.18768 | 0 | 0 | | 18951.18768 | | | |
| Riverside (SC) | 2027 | MHDT | Aggregate | Aggregate | Natural Gas | 191.1860259 | 8560.584881 | 0.965885278 | 965.8852775 | | 8560.584881 | | | |
| Riverside (SC) | 2027 | OBUS | Aggregate | Aggregate | Gasoline | 338.9861834 | 11067.86494 | 2.084603884 | 2084.603884 | 4234.382771 | 11067.86494 | 29125.06177 | 6.88 | OBUS |
| Riverside (SC) | 2027 | OBUS | Aggregate | Aggregate | Diesel | 234.5197906 | 15307.11304 | 1.914675461 | 1914.675461 | | 15307.11304 | | | |
| Riverside (SC) | 2027 | OBUS | Aggregate | Aggregate | Electricity | 5.428935287 | 350.8664874 | 0 | 0 | | 350.8664874 | | | |
| Riverside (SC) | 2027 | OBUS | Aggregate | Aggregate | Natural Gas | 40.94802157 | 2399.217305 | 0.235103425 | 235.1034253 | | 2399.217305 | | | |
| Riverside (SC) | 2027 | SBUS | Aggregate | Aggregate | Gasoline | 430.4295714 | 17027.29145 | 1.934694955 | 1934.694955 | 5925.808471 | 17027.29145 | 38269.32872 | 6.46 | SBUS |
| Riverside (SC) | 2027 | SBUS | Aggregate | Aggregate | Diesel | 464.1146803 | 9303.444431 | 1.262004708 | 1262.004708 | | 9303.444431 | | | |
| Riverside (SC) | 2027 | SBUS | Aggregate | Aggregate | Electricity | 14.63497518 | 401.3400131 | 0 | 0 | | 401.3400131 | | | |
| Riverside (SC) | 2027 | SBUS | Aggregate | Aggregate | Natural Gas | 486.6196132 | 11537.25282 | 2.729108808 | 2729.108808 | | 11537.25282 | | | |
| Riverside (SC) | 2027 | UBUS | Aggregate | Aggregate | Gasoline | 147.0093126 | 18606.89257 | 3.253359958 | 3253.359958 | 10959.60845 | 18606.89257 | 49932.35462 | 4.56 | UBUS |
| Riverside (SC) | 2027 | UBUS | Aggregate | Aggregate | Diesel | 0.3117338 | 30.10971099 | 0.002674823 | 2.674822746 | | 30.10971099 | | | |
| Riverside (SC) | 2027 | UBUS | Aggregate | Aggregate | Electricity | 0.589513765 | 89.99316283 | 0 | 0 | | 89.99316283 | | | |
| Riverside (SC) | 2027 | UBUS | Aggregate | Aggregate | Natural Gas | 253.257931 | 31205.35917 | 7.703573673 | 7703.573673 | | 31205.35917 | | | |

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units:  miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

| Region | endar Yhicle Categ | Model Year | Speed | Fuel | Population | Total VMT | Fuel_Consumption | Fuel_Consumption | Total Fuel | VMT | Total VMT | Miles per Gallon | Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverside (SC) | 2028 HHDT | Aggregate | Aggregate | Gasoline | 3.988581574 | 220.2375349 | 0.053426587 | 53.42658706 | 327968.5957 | 220.2375349 | 2164028.305 | 6.60 | HHDT |
| Riverside (SC) | 2028 HHDT | Aggregate | Aggregate | Diesel | 16286.45202 | 2055799.739 | 318.9296757 | 318929.6757 | | 2055799.739 | | | |
| Riverside (SC) | 2028 HHDT | Aggregate | Aggregate | Electricity | 443.1127679 | 51388.26161 | 0 | 0 | | 51388.26161 | | | |
| Riverside (SC) | 2028 HHDT | Aggregate | Aggregate | Natural Gas | 889.8391393 | 56620.06678 | 8.985493411 | 8985.493411 | | 56620.06678 | | | |
| Riverside (SC) | 2028 LDA | Aggregate | Aggregate | Gasoline | 472360.9133 | 20372156.29 | 634.9783189 | 634978.3189 | 648196.1926 | 20372156.29 | 22779784.76 | 35.14 | LDA |
| Riverside (SC) | 2028 LDA | Aggregate | Aggregate | Diesel | 1078.826078 | 37726.31375 | 0.844929589 | 844.9295888 | | 37726.31375 | | | |
| Riverside (SC) | 2028 LDA | Aggregate | Aggregate | Electricity | 33534.15965 | 1556851.62 | 0 | 0 | | 1556851.62 | | | |
| Riverside (SC) | 2028 LDA | Aggregate | Aggregate | Plug-in Hybric | 16928.42831 | 813050.5364 | 12.37294411 | 12372.94411 | | 813050.5364 | | | |
| Riverside (SC) | 2028 LDT1 | Aggregate | Aggregate | Gasoline | 37855.87026 | 1440444.902 | 54.36871858 | 54368.71858 | 54496.07482 | 1440444.902 | 1458584.787 | 26.76 | LDT1 |
| Riverside (SC) | 2028 LDT1 | Aggregate | Aggregate | Diesel | 6.076587483 | 111.1215276 | 0.004270552 | 4.270551517 | | 111.1215276 | | | |
| Riverside (SC) | 2028 LDT1 | Aggregate | Aggregate | Electricity | 188.4728547 | 9182.136055 | 0 | 0 | | 9182.136055 | | | |
| Riverside (SC) | 2028 LDT1 | Aggregate | Aggregate | Plug-in Hybric | 164.1063254 | 8846.627488 | 0.123085684 | 123.0856837 | | 8846.627488 | | | |
| Riverside (SC) | 2028 LDT2 | Aggregate | Aggregate | Gasoline | 217588.1473 | 9627227.084 | 361.0416912 | 361041.6912 | 364204.6139 | 9627227.084 | 9917690.621 | 27.23 | LDT2 |
| Riverside (SC) | 2028 LDT2 | Aggregate | Aggregate | Diesel | 743.8336965 | 34234.83166 | 0.959155323 | 959.1553231 | | 34234.83166 | | | |
| Riverside (SC) | 2028 LDT2 | Aggregate | Aggregate | Electricity | 3077.663905 | 104270.8577 | 0 | 0 | | 104270.8577 | | | |
| Riverside (SC) | 2028 LDT2 | Aggregate | Aggregate | Plug-in Hybric | 2979.785378 | 151957.8474 | 2.203767446 | 2203.767446 | | 151957.8474 | | | |
| Riverside (SC) | 2028 LHDT1 | Aggregate | Aggregate | Gasoline | 17013.08285 | 635719.8804 | 42.78386012 | 42783.86012 | 67372.46896 | 635719.8804 | 1197558.473 | 17.78 | LHDT1 |
| Riverside (SC) | 2028 LHDT1 | Aggregate | Aggregate | Diesel | 14375.59914 | 513629.3418 | 24.58860884 | 24588.60884 | | 513629.3418 | | | |
| Riverside (SC) | 2028 LHDT1 | Aggregate | Aggregate | Electricity | 775.5486666 | 48209.25082 | 0 | 0 | | 48209.25082 | | | |
| Riverside (SC) | 2028 LHDT2 | Aggregate | Aggregate | Gasoline | 2353.812331 | 83781.03596 | 6.417908056 | 6417.908056 | 19945.38855 | 83781.03596 | 332098.5234 | 16.65 | LHDT2 |
| Riverside (SC) | 2028 LHDT2 | Aggregate | Aggregate | Diesel | 6657.214497 | 236631.625 | 13.52748049 | 13527.48049 | | 236631.625 | | | |
| Riverside (SC) | 2028 LHDT2 | Aggregate | Aggregate | Electricity | 197.0476771 | 11685.86241 | 0 | 0 | | 11685.86241 | | | |
| Riverside (SC) | 2028 MCY | Aggregate | Aggregate | Gasoline | 23825.11116 | 134879.6959 | 3.188684508 | 3188.684508 | 3188.684508 | 134879.6959 | 134879.6959 | 42.30 | MCY |
| Riverside (SC) | 2028 MDV | Aggregate | Aggregate | Gasoline | 157471.3828 | 6419753.084 | 301.5064704 | 301506.4704 | 306577.6338 | 6419753.084 | 6718020.856 | 21.91 | MDV |
| Riverside (SC) | 2028 MDV | Aggregate | Aggregate | Diesel | 2313.319617 | 92055.03155 | 3.64472254 | 3644.72254 | | 92055.03155 | | | |
| Riverside (SC) | 2028 MDV | Aggregate | Aggregate | Electricity | 3280.614214 | 110611.1646 | 0 | 0 | | 110611.1646 | | | |
| Riverside (SC) | 2028 MDV | Aggregate | Aggregate | Plug-in Hybric | 1979.988786 | 95601.57573 | 1.426440918 | 1426.440918 | | 95601.57573 | | | |
| Riverside (SC) | 2028 MH | Aggregate | Aggregate | Gasoline | 3792.760048 | 32136.12659 | 6.576552774 | 6576.552774 | 8080.877903 | 32136.12659 | 47700.74841 | 5.90 | MH |
| Riverside (SC) | 2028 MH | Aggregate | Aggregate | Diesel | 1905.838717 | 15564.62182 | 1.50432513 | 1504.32513 | | 15564.62182 | | | |
| Riverside (SC) | 2028 MHDT | Aggregate | Aggregate | Gasoline | 1167.514336 | 48564.31923 | 8.892465984 | 8892.465984 | 73657.11404 | 48564.31923 | 669292.9757 | 9.09 | MHDT |
| Riverside (SC) | 2028 MHDT | Aggregate | Aggregate | Diesel | 14002.28475 | 581224.0545 | 63.77307861 | 63773.07861 | | 581224.0545 | | | |
| Riverside (SC) | 2028 MHDT | Aggregate | Aggregate | Electricity | 604.2282857 | 30714.98313 | 0 | 0 | | 30714.98313 | | | |
| Riverside (SC) | 2028 MHDT | Aggregate | Aggregate | Natural Gas | 199.9675247 | 8789.618879 | 0.991569449 | 991.5694486 | | 8789.618879 | | | |
| Riverside (SC) | 2028 OBUS | Aggregate | Aggregate | Gasoline | 327.7078639 | 10548.10232 | 1.966652018 | 1966.652018 | 4110.66287 | 10548.10232 | 28947.37014 | 7.04 | OBUS |
| Riverside (SC) | 2028 OBUS | Aggregate | Aggregate | Diesel | 238.556013 | 15389.24479 | 1.90528198 | 1905.28198 | | 15389.24479 | | | |
| Riverside (SC) | 2028 OBUS | Aggregate | Aggregate | Electricity | 8.51445928 | 545.8268781 | 0 | 0 | | 545.8268781 | | | |
| Riverside (SC) | 2028 OBUS | Aggregate | Aggregate | Natural Gas | 42.59688326 | 2464.196156 | 0.238728872 | 238.7288719 | | 2464.196156 | | | |
| Riverside (SC) | 2028 SBUS | Aggregate | Aggregate | Gasoline | 431.0753654 | 17042.56634 | 1.933025708 | 1933.025708 | 5903.130779 | 17042.56634 | 38344.63518 | 6.50 | SBUS |
| Riverside (SC) | 2028 SBUS | Aggregate | Aggregate | Diesel | 451.0585439 | 8951.328084 | 1.211406554 | 1211.406554 | | 8951.328084 | | | |
| Riverside (SC) | 2028 SBUS | Aggregate | Aggregate | Electricity | 23.22081025 | 641.5412948 | 0 | 0 | | 641.5412948 | | | |
| Riverside (SC) | 2028 SBUS | Aggregate | Aggregate | Natural Gas | 499.8225406 | 11709.19947 | 2.758698517 | 2758.698517 | | 11709.19947 | | | |
| Riverside (SC) | 2028 UBUS | Aggregate | Aggregate | Gasoline | 132.0967345 | 16779.39189 | 2.792318822 | 2792.318822 | 8165.960945 | 16779.39189 | 50032.53279 | 6.13 | UBUS |
| Riverside (SC) | 2028 UBUS | Aggregate | Aggregate | Electricity | 56.86515729 | 8885.94529 | 0 | 0 | | 8885.94529 | | | |
| Riverside (SC) | 2028 UBUS | Aggregate | Aggregate | Natural Gas | 213.0114547 | 24367.19561 | 5.373642123 | 5373.642123 | | 24367.19561 | | | |

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