# Sequoia Commerce Center

## Energy Analysis

## City of Torrance


PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Ali Dadabhoy
adadabhoy@urbanxroads.com


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15795-02 EA Report

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| | |
|---|---|
| % | Percent |
| (1) | Reference |
| AQIA | *Sequoia Commerce Center 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 Torrance |
| 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 |
| GWh | Gigawatt Hour |
| HHD | 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 |
| kWh | Kilowatt Hour |
| LDA | Light Duty Auto |
| LDT1/LDT2 | Light-Duty Trucks |
| LHD1/LHD2 | Light-Heavy Duty Trucks |
| MDV | Medium Duty Trucks |
| MHD | 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 | Sequoia Commerce Center |
| SCAB | South Coast Air Basin |
| SCE | Southern California Edison |
| SDAB | San Diego Air Basin |
| sf | Square Feet |
| SoCalGas | Southern California Gas |
| TEA-21 | Transportation Equity Act for the 21$^{st}$ Century |
| U.S. | United States |
| VMT | Vehicle Miles Traveled |

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# EXECUTIVE SUMMARY

## ES.1 SUMMARY OF FINDINGS

The results of this *Sequoia Commerce Center Energy Analysis* is summarized below based on the significance criteria in Section 6 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Statute and 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 $21^{st}$ 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)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations is discussed in detail in section 6 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 Sequoia Commerce Center Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Torrance (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.

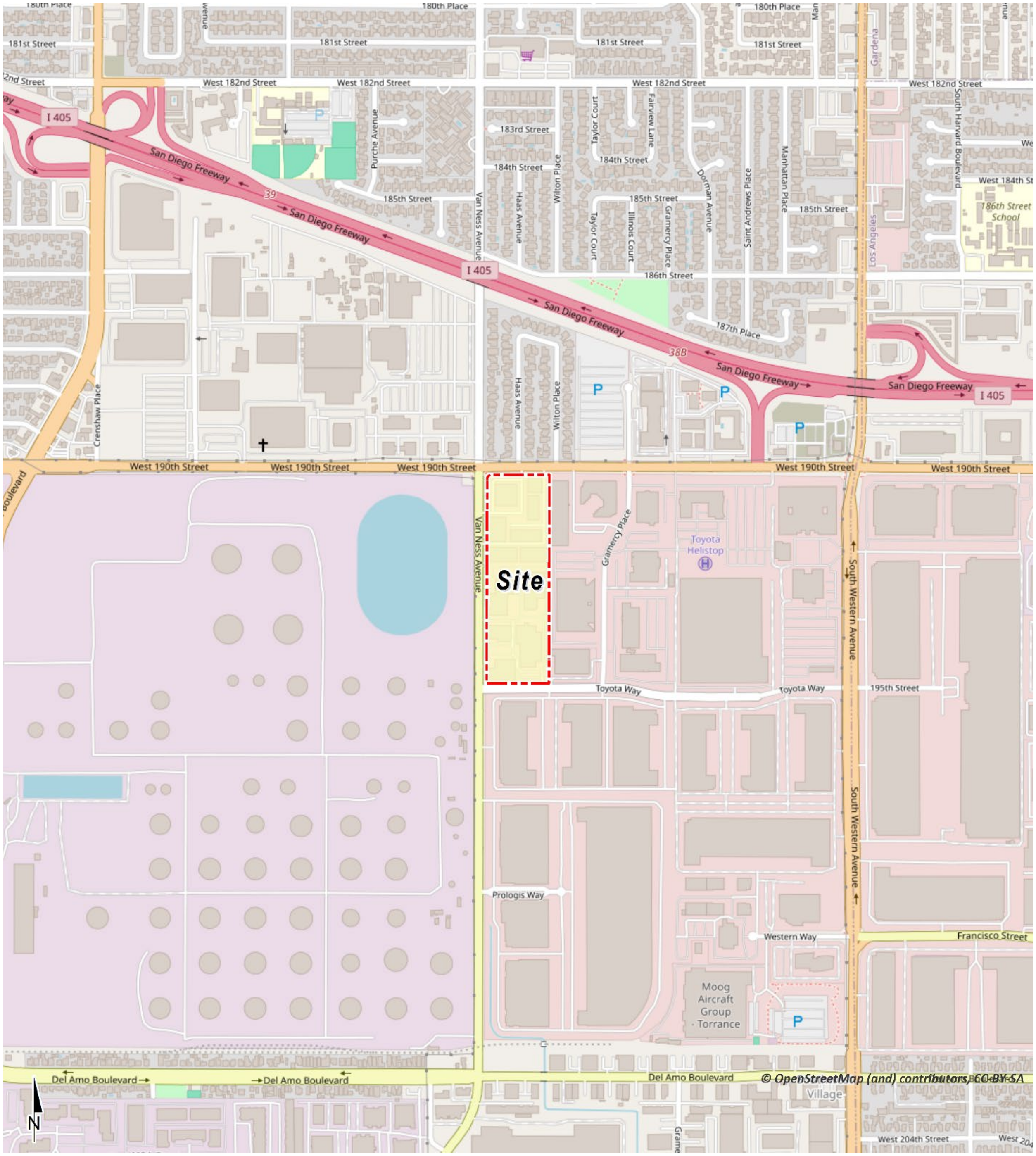
## 1.1 SITE LOCATION

The proposed Project is located southeast corner of Van Ness Avenue and 190th Street at 19250/19320 Van Ness Avenue within the City of Torrance (Assessor's Parcel Numbers or APNs 7352-016-001, 7352-016-002, and 7352-016-003) as shown in Exhibit 1-A.

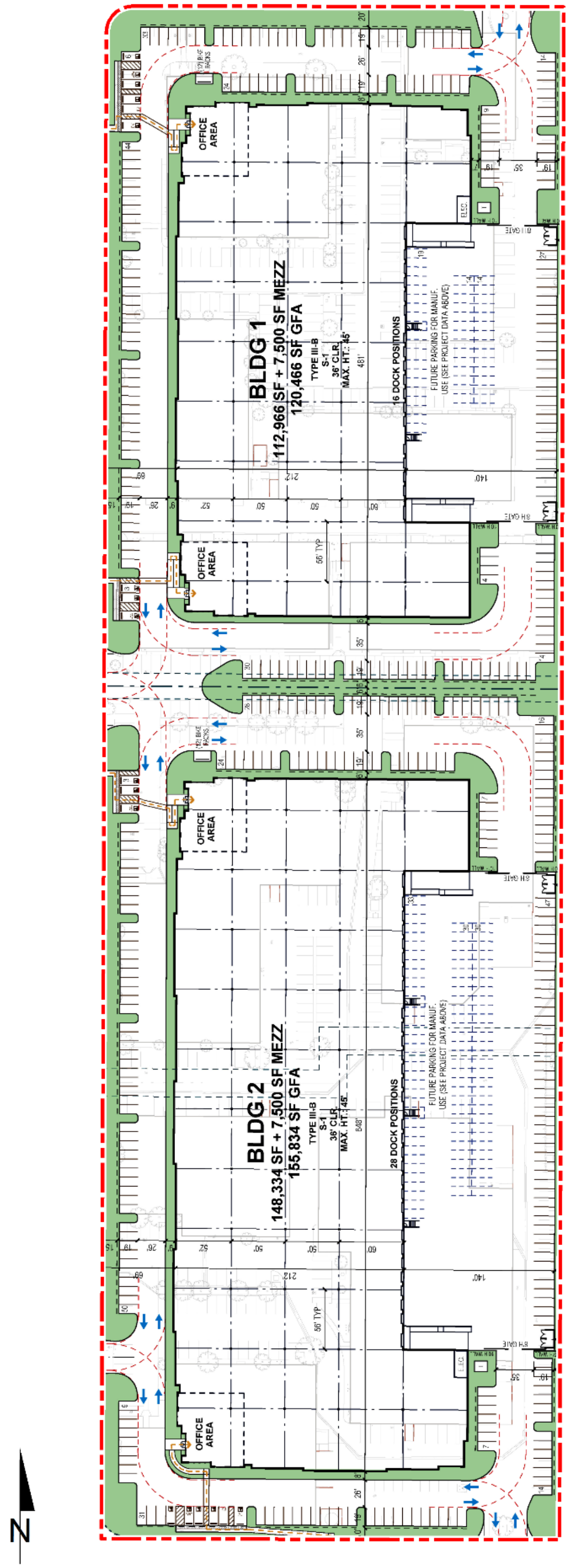
## 1.2 PROJECT DESCRIPTION

The Project site is currently developed with 13 buildings totaling approximately 275,000 square feet of business park use. The proposed Project plans to develop two (2) new proposed industrial buildings: an approximately 120,466 square foot (SF) industrial building (Building 1) with 208 parking stalls and an approximately 155,834 SF industrial building (Building 2) with 236 parking stalls on an approximate 14.02-acre site. The preliminary site plan for the proposed Project is shown in Exhibit 1-B.

## EXHIBIT 1-A: LOCATION MAP



## 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 2022, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates and includes (2):

- As of 2022, approximately 6,882 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2022, approximately 628 million barrels of petroleum
- As of 2022, approximately 2,059 billion cubic feet of natural gas
- As of 2022, approximately 1,322 thousand short tons of coal

According to the EIA, in 2022 the U.S. petroleum consumption comprised about 90% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (3). In 2023, about 253,289 million gallons (or about 6.031 million barrels) of finished petroleum products were consumed in the U.S., an average of about 694 million gallons per day (or about 16.5 million barrels per day) (4). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day) (5).

The most recent data provided by the EIA for energy use in California is reported from 2021 and provided by demand sectors as follows:

- Approximately 41.3% transportation sector
- Approximately 23.5% industrial sector
- Approximately 18.1% residential sector
- Approximately 17.0% commercial sector (6)

According to the EIA, California used approximately 251,869 gigawatt hours of electricity in 2022 (7). By sector in 2022, residential uses utilized 35.6% of the state's electricity, followed by 45.3% for commercial uses, 18.9% 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 200,871 million therms of natural gas in 2022 (8). In 2023 (the most recent year for which data is available), by sector, industrial uses utilized 31% of the state's natural gas, followed by 32% used as fuel in the electric power sector, 23% from residential, 13% from commercial, 1% 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 2022, total system electric generation for California was 287,220 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 203,257 GWh which accounted for approximately 71% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (17%) (9). Natural gas is the main source for electricity generation at 47.46% 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 2023, California was the seventh-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, after Texas, but its per capita energy consumption is the fourth-lowest in the nation.
- In 2023, renewable resources, including hydroelectric power and small-scale solar power, supplied 54% of California's in-state electricity generation. Natural gas fueled another 39% and nuclear power provided almost all the rest.
- In 2023, California was the fourth-largest electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports more electricity than any other state.

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 2022)

| 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 | 273 | 0.13% | 181 | 5,716 | 5,897 | 6,170 | 2.15% |
| Natural Gas | 96,457 | 47.46% | 44 | 7,994 | 8,038 | 104,495 | 36.38% |
| Oil | 65 | 0.03% | - | - | - | 65 | 0.2% |
| Other (Waste Heat/Petroleum Coke) | 315 | 0.15% | - | - | - | 315 | 0.11% |
| Unspecified | - | 0.0% | 12,485 | 7,943 | 20,428 | 20,428 | 7.11% |
| Total Thermal and Unspecified | **97,110** | **47.78%** | **12,710** | **21,653** | **34,363** | **121,473** | **45.77%** |
| Nuclear | 17,627 | 8.67% | 397 | 8,342 | 8,739 | 26,366 | 9.18% |
| Large Hydro | 14,607 | 7.19% | 10,803 | 1,118 | 11,921 | 26,528 | 9.24% |
| Biomass | 5,366 | 2.64% | 771 | 25 | 797 | 6,162 | 2.15% |
| Geothermal | 11,110 | 5.47% | 253 | 2,048 | 2,301 | 13,412 | 4.67% |
| Small Hydro | 3,005 | 1.48% | 211 | 13 | 225 | 3,230 | 1.12% |
| Solar | 40,494 | 19.92% | 231 | 8,225 | 8,456 | 48,950 | 17.04% |
| Wind | 13,938 | 6.86% | 8,804 | 8,357 | 17,161 | 31,099 | 10.83% |
| Total Non-GHG and Renewables | **106,147** | **52.22%** | **21,471** | **28,129** | **49,599** | **155,747** | **54.23%** |
| ***SYSTEM TOTALS*** | ***203,257*** | ***100.0%*** | ***34,180*** | ***49,782*** | ***83,962*** | ***287,220*** | ***100.0%*** |

## 2.2 ELECTRICITY

The usage associated with electricity use was calculated using CalEEMod Version 2022.1. 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 South Coast Air Basin (SCAB) 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 2023 IEPR's 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 Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2022 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (13).

Table 2-2, SCE's specific proportional shares of electricity sources in 2022. As indicated in Table 2-2, the 2022 SCE Power Mix has renewable energy at 33.2% of the overall energy resources.

Geothermal resources are at 5.7%, wind power is at 9.8%, large hydroelectric sources are at 3.4%, solar energy is at 17.0%, and coal is at 0% (14).

**TABLE 2-2: SCE 2022 POWER CONTENT MIX**

| Energy Resources | 2022 SCE Power Mix |
|---|---|
| ***Eligible Renewable*** | **33.2%** |
| Biomass & Waste | 0.1% |
| Geothermal | 5.7% |
| Eligible Hydroelectric | 0.5% |
| Solar | 17.0% |
| Wind | 9.8% |
| ***Coal*** | **0.0%** |
| ***Large Hydroelectric*** | **3.4%** |
| ***Natural Gas*** | **24.7%** |
| ***Nuclear*** | **8.3%** |
| ***Other*** | **0.1%** |
| Unspecified Sources of power* | 30.3% |
| **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 commercials 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 that deliver out-of-state natural gas to California gas utilities 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 California Public Utilities Commission 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 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.

Based on information provided by the Project applicant, the industrial portion of the proposed Project would not utilize natural gas. Natural gas associated with the HVAC system for the office portion of the Project was calculated by CalEEMod using default parameters.

## 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) identified 36.2 million registered vehicles in California (6), and those vehicles consume an estimated 17.2 billion gallons of fuel each year.[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 8% of the nation's total consumption. The State is the largest U.S. consumer of motor gasoline and jet fuel, and 83% of the petroleum consumed in California is used in the transportation sector (16).

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 2023, about 32% of the natural gas delivered to consumers went to the State's industrial sector, and about 31% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the State's utility-scale electricity generation in 2023. The residential sector, where three-fifths of California households use natural gas for home heating, accounted for 23% of natural gas deliveries. The commercial sector received 13% of the deliveries to end users and the transportation sector consumed the remaining 1% (16)

[1] Fuel consumptions estimated utilizing information from EMFAC2021.

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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 $21^{ST}$ CENTURY (TEA-21)

TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

## 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 2023 IEPR was adopted February 2024, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2023 IEPR introduces a new framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2023 IEPR (17).

### 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 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: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2022 version of Title 24 was adopted by the CEC and became effective on January 1, 2023. The 2022 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings.

The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (18). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (19):

#### NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).

- Electric vehicle (EV) charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3).
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).

- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

### 3.2.4 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required 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 (20).

### 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 4 5% 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 electrify 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).

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# 4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

## 4.1 EVALUATION CRITERIA

Appendix F of the *State CEQA Guidelines* (21), 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* (1), 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 *Sequoia Commerce Center 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 (EMFAC2021) 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. Outputs from the EMFAC2021 model run is provided in Appendix 4.3.

## 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, construction of Project is expected to commence in May 2027 and will last through April 2028 (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 |
|---|---|---|---|
| Demolition | 5/3/2027 | 5/31/2027 | 21 |
| Site Preparation | 6/1/2027 | 6/15/2027 | 11 |
| Grading | 6/16/2027 | 7/28/2027 | 31 |
| Building Construction | 7/29/2027 | 4/28/2028 | 197 |
| Paving | 4/3/2028 | 4/28/2028 | 20 |
| Architectural Coating | 3/20/2028 | 4/28/2028 | 30 |

#### PROJECT CONSTRUCTION POWER COST

The *2024 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.66, which was used to calculate the Project's total construction power cost (26).

As shown on Table 4-2, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $17,860.44.

**TABLE 4-2: CONSTRUCTION POWER COST**

| Land Use | **Power Cost** (per 1,000 SF of construction per month) | **Size** (1,000 SF) | **Construction Duration** (months) | **Project Construction Power Cost** |
|---|---|---|---|---|
| Manufacturing | $2.66 | 179.000 | 11 | $5,237.54 |
| Unrefrigerated Warehouse-No Rail | $2.66 | 97.30 | 11 | $2,847.00 |
| Other Asphalt Surfaces | $2.66 | 175.55 | 11 | $5,136.50 |
| Parking Lot | $2.66 | 158.56 | 11 | $4,639.41 |
| | | | ***CONSTRUCTION POWER COST*** | ***$17,860.44*** |

### 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 kilowatt hour (kWh) of electricity.

#### PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule was used to determine the Project's electrical usage. As of March 28, 2024, SCE's general service rate is $0.15 per kilowatt hours (kWh) of electricity for industrial uses (27). As shown on Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 119,070 kWh.

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

| Land Use | Cost per kWh | Project Construction Electricity Usage (kWh) |
|---|---|---|
| Manufacturing | $0.15 | 34,917 |
| Unrefrigerated Warehouse-No Rail | $0.15 | 18,980 |
| Other Asphalt Surfaces | $0.15 | 34,243 |
| Parking Lot | $0.15 | 30,929 |
| | ***CONSTRUCTION ELECTRICITY USAGE*** | ***119,070*** |

### 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 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.

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

| Construction Activity | Equipment | Amount | Hours Per Day |
|---|---|---|---|
| Demolition | Rubber Tired Dozers | 2 | 8 |
| | Excavators | 3 | 8 |
| | Concrete/Industrial Saws | 1 | 8 |
| Site Preparation | Rubber Tired Dozers | 3 | 8 |
| | Crawler Tractors | 4 | 8 |
| Grading | Graders | 1 | 8 |
| | Excavators | 2 | 8 |
| | Scrapers | 2 | 8 |
| | Rubber Tired Dozers | 1 | 8 |
| | Crawler Tractors | 2 | 8 |
| Building Construction | Forklifts | 3 | 8 |
| | Generator Sets | 1 | 8 |
| | Cranes | 1 | 8 |
| | Welders | 1 | 8 |
| | Tractors/Loaders/Backhoes | 3 | 8 |
| Paving | Pavers | 2 | 8 |
| | Paving Equipment | 2 | 8 |
| | Rollers | 2 | 8 |
| Architectural Coating | Air Compressors | 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 industrial fuel providers serving the Project area and region[2]. As presented in Table 4-5, Project construction activities would consume an estimated 41,116 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require ongoing 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 ESTIMATES

| Construction Activity | Duration (Days) | Equipment | HP Rating | Quantity | Usage Hours | Load Factor | HP-hrs/day | Total Fuel Consumption |
|---|---|---|---|---|---|---|---|---|
| Demolition | 21 | Rubber Tired Dozers | 367 | 2 | 8 | 0.4 | 2,349 | 2,666 |
| | | Excavators | 36 | 3 | 8 | 0.38 | 328 | 373 |
| | | Concrete/Industrial Saws | 33 | 1 | 8 | 0.73 | 193 | 219 |
| Site Preparation | 11 | Rubber Tired Dozers | 367 | 3 | 8 | 0.4 | 3,523 | 2,095 |
| | | Crawler Tractors | 87 | 4 | 8 | 0.43 | 1,197 | 712 |
| Grading | 31 | Graders | 148 | 1 | 8 | 0.41 | 485 | 813 |
| | | Excavators | 36 | 2 | 8 | 0.38 | 219 | 367 |
| | | Crawler Tractors | 87 | 2 | 8 | 0.43 | 599 | 1,003 |
| | | Scrapers | 423 | 2 | 8 | 0.48 | 3,249 | 5,444 |
| | | Rubber Tired Dozers | 367 | 1 | 8 | 0.4 | 1,174 | 1,968 |
| Building Construction | 197 | Forklifts | 82 | 3 | 8 | 0.2 | 394 | 4,191 |
| | | Generator Sets | 14 | 1 | 8 | 0.74 | 83 | 883 |
| | | Cranes | 367 | 1 | 8 | 0.29 | 851 | 9,067 |
| | | Welders | 46 | 1 | 8 | 0.45 | 166 | 1,763 |
| | | Tractors/Loaders/Backhoes | 84 | 3 | 8 | 0.37 | 746 | 7,943 |
| Paving | 20 | Pavers | 81 | 2 | 8 | 0.42 | 544 | 588 |
| | | Paving Equipment | 89 | 2 | 8 | 0.36 | 513 | 554 |
| | | Rollers | 36 | 2 | 8 | 0.38 | 219 | 237 |
| Architectural Coating | 30 | Air Compressors | 37 | 1 | 8 | 0.48 | 142 | 230 |
| ***CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)*** | | | | | | | | ***41,116*** |

### 4.3.4 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of workers 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 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. Additionally, because paving and architectural coating activities overlap with building construction, the vendor trips assigned to building construction activities are assumed to be the same trips used to cover paving and architectural coating.

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

| Construction Activity | Worker Trips Per Day | Vendor Trips Per Day | Hauling Trips Per Day |
|---|---|---|---|
| Demolition | 15 | 4 | 151 |
| Site Preparation | 18 | 2 | 0 |
| Grading | 20 | 5 | 0 |
| Building Construction | 116 | 34 | 0 |
| Paving | 15 | 0 | 0 |
| Architectural Coating | 23 | 0 | 0 |

### 4.3.5 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips (personal vehicles used by workers commuting to the Project from home) would generate an estimated 463,555 VMT during the 11 months of construction (22). Based on CalEEMod methodology, it is assumed that 50% of all construction 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. EMFAC 2021 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). EMFAC 2021 was run for the LDA, LDT1, and LDT2 vehicle class within the Los Angeles South Coast sub-area for the 2027 and 2028 calendar years. Data from EMFAC 2021 is shown in Appendix 4.3.

As shown in Table 4-7, the estimated annual fuel consumption resulting from Project construction worker trips is 15,609 gallons during full construction of the Project. It should be

[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.

noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require ongoing or permanent commitment of fuel resources for this purpose.

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

| Year | Construction Activity | Duration (Days) | Worker Trips/Day | Trip Length (miles) | VMT | Average Vehicle Fuel Economy (mpg) | Estimated Fuel Consumption (gallons) |
|---|---|---|---|---|---|---|---|
| 2027 | LDA | | | | | | |
| | Demolition | 21 | 8 | 18.5 | 3,108 | 33.97 | 91 |
| | Site Preparation | 11 | 9 | 18.5 | 1,832 | 33.97 | 54 |
| | Grading | 31 | 10 | 18.5 | 5,735 | 33.97 | 169 |
| | Building Construction | 112 | 58 | 18.5 | 120,176 | 33.97 | 3,538 |
| | LDT1 | | | | | | |
| | Demolition | 21 | 4 | 18.5 | 1,554 | 25.86 | 60 |
| | Site Preparation | 11 | 5 | 18.5 | 1,018 | 25.86 | 39 |
| | Grading | 31 | 5 | 18.5 | 2,868 | 25.86 | 111 |
| | Building Construction | 112 | 29 | 18.5 | 60,088 | 25.86 | 2,323 |
| | LDT2 | | | | | | |
| | Demolition | 21 | 4 | 18.5 | 1,554 | 26.03 | 60 |
| | Site Preparation | 11 | 5 | 18.5 | 1,018 | 26.03 | 39 |
| | Grading | 31 | 5 | 18.5 | 2,868 | 26.03 | 110 |
| | Building Construction | 112 | 29 | 18.5 | 60,088 | 26.03 | 2,308 |
| 2028 | LDA | | | | | | |
| | Building Construction | 85 | 58 | 18.5 | 91,205 | 34.79 | 2,622 |
| | Paving | 20 | 8 | 18.5 | 2,960 | 34.79 | 85 |
| | Architectural Coating | 30 | 12 | 18.5 | 6,660 | 34.79 | 191 |
| | LDT1 | | | | | | |
| | Building Construction | 85 | 29 | 18.5 | 45,603 | 26.37 | 1,729 |
| | Paving | 20 | 4 | 18.5 | 1,480 | 26.37 | 56 |
| | Architectural Coating | 30 | 6 | 18.5 | 3,330 | 26.37 | 126 |
| | LDT2 | | | | | | |
| | Building Construction | 85 | 29 | 18.5 | 45,603 | 26.60 | 1,715 |
| | Paving | 20 | 4 | 18.5 | 1,480 | 26.60 | 56 |
| | Architectural Coating | 30 | 6 | 18.5 | 3,330 | 26.60 | 125 |
| ***TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION*** | | | | | | | ***15,609*** |

### 4.3.6 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 134,718 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 (MHD), 50% of all vendor trips are from heavy-heavy duty trucks (HHD), and 100% of all hauling trips are HHDs. These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (22). Vehicle fuel efficiencies for MHDs and HHDs were estimated using information generated within EMFAC 2021. EMFAC 2021 was run for the MHD and HHD vehicle classes within the Los Angeles South Coast sub-area for the 2027 and 2028 calendar years. Data from EMFAC2021 is shown in Appendix 4.3.

Based on Table 4-8, it is estimated that 19,884 gallons of fuel will be consumed related to construction vendor trips during full construction of the Project. It should be noted that Project construction vendor 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 FUEL CONSUMPTION ESTIMATES**

| Year | Construction Activity | Duration (Days) | Vendor/ Hauling Trips/Day | Trip Length (miles) | VMT | Average Vehicle Fuel Economy (mpg) | Estimated Fuel Consumption (gallons) |
|---|---|---|---|---|---|---|---|
| 2025 | MHD | | | | | | |
| | Demolition | 21 | 2 | 10.2 | 428 | 8.02 | 53 |
| | Site Preparation | 11 | 1 | 10.2 | 112 | 8.02 | 14 |
| | Grading | 31 | 3 | 10.2 | 949 | 8.02 | 118 |
| | Building Construction | 112 | 17 | 10.2 | 19,421 | 8.02 | 2,422 |
| | HHD (Vendor) | | | | | | |
| | Demolition | 21 | 2 | 10.2 | 428 | 6.38 | 67 |
| | Site Preparation | 11 | 1 | 10.2 | 112 | 6.38 | 18 |
| | Grading | 31 | 3 | 10.2 | 949 | 6.38 | 149 |
| | Building Construction | 112 | 17 | 10.2 | 19,421 | 6.38 | 3,046 |
| | HHD (Hauling) | | | | | | |
| | Demolition | 21 | 151 | 20 | 63,420 | 6.38 | 9,946 |
| 2026 | MHD | | | | | | |
| | Building Construction | 85 | 17 | 10.2 | 14,739 | 8.23 | 1,791 |
| | HHD (Vendor) | | | | | | |
| | Building Construction | 85 | 17 | 10.2 | 14,739 | 6.52 | 2,260 |
| ***TOTAL CONSTRUCTION VENDOR/HAULING FUEL CONSUMPTION*** | | | | | | | ***19,884*** |

### 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 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, 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 fuel demands (fuel consumed by passenger car and truck vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by development operations and site maintenance activities).

### 4.4.1 Transportation Fuel Demands

#### Existing Transportation Energy Demands

The Project site is currently developed with 13 buildings totaling approximately 275,000 square feet of business park use which will be demolished and replaced with the proposed Project. The estimated transportation energy demands from the existing development are summarized on Table 4-9. CalEEMod emissions and energy associated with the existing use are shown in Appendix 4.2.

**TABLE 4-9: EXISTING-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION**

| Vehicle Type | **Average Vehicle Fuel Economy** (mpg) | Annual VMT | **Estimated Annual Fuel Consumption** (gallons) |
|---|---|---|---|
| LDA | 31.24 | 1,605,776 | 51,398 |
| LDT1 | 24.32 | 140,347 | 5,772 |
| LDT2 | 24.04 | 714,666 | 29,724 |
| MDV | 19.71 | 435,142 | 22,073 |
| LHDT1 | 15.32 | 358,182 | 23,387 |
| LHDT2 | 14.66 | 87,911 | 5,997 |
| MHDT | 7.60 | 38,791 | 5,104 |
| HHDT | 6.04 | 72,733 | 12,042 |
| MCY | 41.21 | 65,849 | 1,598 |
| | ***TOTAL (ALL VEHICLES)*** | ***3,519,395*** | ***157,096*** |

#### Proposed Project 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 evaluated in the vehicle fleet mix and the total VMT. As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (24). EMFAC2021 was run for the Los Angeles South Coast sub-area for the 2028 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

As summarized on Table 4-10, the Project would result in an estimated net increase of 213,571 annual VMT and an annual fuel consumption of 88,126 gallons of fuel.

**TABLE 4-10: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION**

| Vehicle Type | Average Vehicle Fuel Economy (mpg) | Annual VMT | Estimated Annual Fuel Consumption (gallons) |
|---|---|---|---|
| LDA | 34.79 | 1,300,817 | 37,396 |
| LDT1 | 26.37 | 111,147 | 4,215 |
| LDT2 | 26.60 | 651,331 | 24,489 |
| MDV | 21.97 | 386,667 | 17,597 |
| LHDT1 | 17.37 | 161,883 | 9,319 |
| LHDT2 | 16.45 | 42,033 | 2,555 |
| MHDT | 8.23 | 255,155 | 31,005 |
| HHDT | 6.52 | 764,424 | 117,218 |
| MCY | 41.67 | 59,510 | 1,428 |
| ***TOTAL (ALL VEHICLES)*** | | ***3,732,966*** | ***245,222*** |
| *Existing Total (All Vehicles)* | | *3,519,395* | *157,096* |
| ***NET TOTAL (Proposed – Existing)*** | | ***213,571*** | ***88,126*** |

### 4.4.2 ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, all on-site equipment (cargo handling equipment, yard goats, forklifts) utilized for the operation of the proposed Project will be electric powered.

### 4.4.3 EMERGENCY ENGINE FUEL DEMANDS

The proposed Project was conservatively assumed to include installation of two 300-horsepower diesel-powered fire pumps and two 700-horsepower diesel-powered emergency generators at the industrial buildings. The fire pumps and emergency generators were estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. As presented in Table 4-11, the fire pumps and emergency generators operation for maintenance and testing purposes would consume an estimated 3,766 gallons of diesel fuel per year.

**TABLE 4-11: EMERGENCY ENGINE FUEL CONSUMPTION ESTIMATES**

| Equipment | Amount | Horsepower | Fuel Consumption (gal./hour) | Activity (hrs./yr) | Total Fuel Consumption (gal./year) |
|---|---|---|---|---|---|
| Emergency Generator | 2 | 700 | 26 | 50 | 2,636 |
| Fire Pump | 2 | 300 | 11 | 50 | 1,130 |
| ***EMERGENCY ENGINE FUEL DEMAND (GALLONS FUEL)*** | | | | | ***3,766*** |

### 4.4.4 FACILITY ENERGY DEMANDS

**EXISTING FACILITY ENERGY DEMANDS**

The Project site is currently developed with 13 buildings totaling approximately 275,000 square feet of business park use which will be demolished and replaced with the proposed Project. The estimated facility energy demands from the existing development are summarized on Table 4-12.

**TABLE 4-12: EXISTING ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY**

| Land Use | **Electricity Demand** (kWh/year) | **Natural Gas Demand** (kBTU/year) |
|---|---|---|
| Unrefrigerated Warehouse-No Rail | 1,287,100 | 5,300,940 |
| ***TOTAL PROJECT ENERGY DEMAND*** | ***1,287,100*** | ***5,300,940*** |

**PROPOSED PROJECT FACILITY ENERGY DEMANDS**

Project development operations activities would result in the consumption of electricity and natural gas. Electricity and natural gas would be supplied to the Project by SCE and SoCal Gas. Annual electricity and natural gas demands for the Project are summarized in Table 4-13 and provided in Appendix 4.1. As summarized on Table 4-13 the Project would result in a net increase of 1,024,296 kWh/year of electricity and a net decrease of 4,540,546 kBTU/year of natural gas.

Based on information provided by the Project applicant, the industrial portion of the proposed Project would not utilize natural gas. Natural gas associated with the HVAC system for the office portion of the Project was calculated by CalEEMod using default parameters and was added to the manufacturing land use.

**TABLE 4-13: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY**

| Land Use | **Electricity Demand** (kWh/year) | **Natural Gas Demand** (kBTU/year) |
|---|---|---|
| Manufacturing | 1,717,100 | 760,394 |
| Unrefrigerated Warehouse-No Rail | 455,399 | 0 |
| Other Asphalt Surfaces | 0 | 0 |
| Parking Lot | 138,897 | 0 |
| ***TOTAL PROJECT ENERGY DEMAND*** | ***2,311,396*** | ***760,394*** |
| *Existing Energy Demands* | *1,287,100* | *5,300,940* |
| ***NET TOTAL (Proposed – Existing)*** | ***1,024,296*** | ***-4,540,546*** |

kBTU – kilo-British Thermal Units

### 4.4.5 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).

#### ENHANCED VEHICLE FUEL EFFICIENCIES

Project annual fuel consumption estimates presented previously in Table 4-10 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. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

## 4.5 SUMMARY

### 4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $17,860.44. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project buildout, is calculated to be approximately 119,070 kWh.

Construction equipment used by the Project would result in a single event consumption of approximately 41,116 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 15,609 gallons of fuel. Additionally, fuel consumption from construction vendor and hauling trips (MHDs and HHDs) will total approximately 19,884 gallons. Diesel fuel would be supplied by City and regional industrial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2023 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 (11). 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 net increase in fuel demand of 554,922 gallons of fuel.

Fuel would be provided by current and future industrial vendors. Trip generation and VMT generated by the Project are consistent with other industrial 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 industrial uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25% by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks

must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent (29).

- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

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 location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

**ON-SITE CARGO HANDLING EQUIPMENT FUEL DEMANDS**

As previously stated, it is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, all on-site equipment (cargo handling equipment, yard goats, forklifts) utilized for the operation of the proposed Project will be electric powered which promotes less fuel consumption and usage.

**FACILITY ENERGY DEMANDS**

Project facility operational energy demands are estimated to result in a net increase of 1,024,296 kWh/year of electricity and a net decrease of 4,540,546 kBTU/year of natural gas, which would be supplied by SCE and SoCal Gas respectively. The Project proposes conventional industrial 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 industrial uses of similar scale and configuration.

Lastly, 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***

A significant impact would occur if the proposed Project would result in the inefficient, wasteful, or unnecessary use of energy.

*Construction*

Based on CalEEMod estimations within the modeling output files used to estimate GHG emissions associated with the Project, construction-related vehicle trips would result in approximately 598,273 VMT and consume an estimated 35,493 gallons of gasoline and diesel combined during construction. Additionally, on-site construction equipment would consume an estimated 41,116 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 ARB. 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 truck and passenger vehicle traffic associated with the Project. 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 a net increase of 1,024,296 kWh/year of electricity and a net decrease of 4,540,546 kBTU/year of natural gas.

The 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, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

**Fuel**

Operational energy would also be consumed during vehicle trips associated with the Project. Fuel consumption would be primarily related to vehicle use by visitors and employees associated with the Project. Based on CalEEMod energy use estimations, project-related vehicle trips would result in a net increase of 213,571 VMT and consume an estimated 88,126 gallons of gasoline and diesel combined, annually (see Appendix 4.1).

The Project is surrounded by existing transportation facilities and infrastructure which would provide future visitors and employees associated with the Project access to a mix of land uses near the Project, thus further reducing fuel consumption demand. Additionally, the Project will also be providing parking and EV infrastructure that would further promote fuel efficient vehicles. 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***

A significant impact would occur if the proposed Project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

*Construction*

As discussed in Section 5.1, above, the 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 any temporary buildings that may be needed during construction, which may include on-site lighting and power to construction offices. 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 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 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, the Project would result in a net increase of 1,024,296 kWh/year of electricity and a net decrease of 4,540,546 kBTU/year of natural gas.

The 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, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Compliance with the aforementioned mandatory measures would ensure that the 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.

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# 7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Sequoia Commerce Center. 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.

Haseeb Qureshi
Principal
Urban Crossroads, Inc.
hqureshi@urbanxroads.com

### EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

### PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Professionals
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 – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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# APPENDIX 4.1:

# CALEEMOD PROJECT EMISSIONS MODEL OUTPUTS

# 15795 - Sequoia Commerce Center (Proposed) Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15795 - Sequoia Commerce Center (Proposed) |
| Construction Start Date | 5/3/2027 |
| Operational Year | 2028 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.50 |
| Precipitation (days) | 17.4 |
| Location | 2172 W 190th St, Torrance, CA 90501, USA |
| County | Los Angeles-South Coast |
| City | Torrance |
| Air District | South Coast AQMD |
| Air Basin | South Coast |
| TAZ | 4669 |
| EDFZ | 7 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.28 |

## 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 |
|---|---|---|---|---|---|---|---|---|
| Manufacturing | 179 | 1000sqft | 4.11 | 179,000 | 53,300 | — | — | Trucks |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 97.3 | 1000sqft | 2.23 | 97,300 | 28,700 | — | — | Trucks |
| Other Asphalt Surfaces | 4.03 | Acre | 4.03 | 0.00 | 0.00 | — | — | — |
| Parking Lot | 584 | Space | 3.64 | 0.00 | 0.00 | — | — | — |
| User Defined Industrial | 276 | User Defined Unit | 0.00 | 0.00 | 0.00 | — | — | PC |

## 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. | 49.7 | 49.3 | 32.9 | 34.7 | 0.10 | 1.62 | 6.52 | 7.53 | 1.49 | 2.74 | 4.24 | — | 13,791 | 13,791 | 0.65 | 1.69 | 22.3 | 14,331 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 47.9 | 47.5 | 12.4 | 22.7 | 0.04 | 0.37 | 2.11 | 2.46 | 0.34 | 0.51 | 0.83 | — | 5,547 | 5,547 | 0.17 | 0.23 | 0.20 | 5,621 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 4.31 | 4.22 | 8.88 | 11.2 | 0.02 | 0.32 | 1.35 | 1.67 | 0.30 | 0.38 | 0.68 | — | 3,147 | 3,147 | 0.12 | 0.17 | 1.60 | 3,203 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.79 | 0.77 | 1.62 | 2.04 | < 0.005 | 0.06 | 0.25 | 0.31 | 0.05 | 0.07 | 0.12 | — | 521 | 521 | 0.02 | 0.03 | 0.26 | 530 |

## 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 | 4.41 | 3.71 | 32.9 | 31.5 | 0.10 | 1.62 | 6.52 | 7.53 | 1.49 | 2.74 | 4.24 | — | 13,791 | 13,791 | 0.65 | 1.69 | 22.3 | 14,331 |
| 2028 | 49.7 | 49.3 | 19.0 | 34.7 | 0.05 | 0.61 | 2.31 | 2.92 | 0.56 | 0.55 | 1.11 | — | 7,348 | 7,348 | 0.23 | 0.25 | 8.31 | 7,437 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 1.86 | 1.55 | 11.8 | 20.5 | 0.03 | 0.37 | 1.81 | 2.18 | 0.34 | 0.44 | 0.78 | — | 5,132 | 5,132 | 0.17 | 0.22 | 0.19 | 5,202 |
| 2028 | 47.9 | 47.5 | 12.4 | 22.7 | 0.04 | 0.35 | 2.11 | 2.46 | 0.33 | 0.51 | 0.83 | — | 5,547 | 5,547 | 0.17 | 0.23 | 0.20 | 5,621 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 1.23 | 1.01 | 8.88 | 11.2 | 0.02 | 0.32 | 1.35 | 1.67 | 0.30 | 0.38 | 0.68 | — | 3,147 | 3,147 | 0.12 | 0.17 | 1.60 | 3,203 |
| 2028 | 4.31 | 4.22 | 3.08 | 5.55 | 0.01 | 0.09 | 0.45 | 0.54 | 0.09 | 0.11 | 0.19 | — | 1,320 | 1,320 | 0.04 | 0.05 | 0.74 | 1,338 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2027 | 0.23 | 0.18 | 1.62 | 2.04 | < 0.005 | 0.06 | 0.25 | 0.31 | 0.05 | 0.07 | 0.12 | — | 521 | 521 | 0.02 | 0.03 | 0.26 | 530 |
| 2028 | 0.79 | 0.77 | 0.56 | 1.01 | < 0.005 | 0.02 | 0.08 | 0.10 | 0.02 | 0.02 | 0.04 | — | 219 | 219 | 0.01 | 0.01 | 0.12 | 221 |

## 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. | 15.7 | 14.5 | 22.4 | 51.6 | 0.19 | 0.71 | 10.1 | 10.8 | 0.69 | 2.61 | 3.30 | 291 | 22,577 | 22,868 | 30.5 | 2.22 | 62.7 | 24,355 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unmit. | 13.6 | 12.5 | 22.9 | 37.3 | 0.18 | 0.69 | 10.1 | 10.7 | 0.68 | 2.61 | 3.28 | 291 | 22,235 | 22,526 | 30.5 | 2.24 | 17.9 | 23,972 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 11.1 | 10.4 | 12.1 | 32.4 | 0.13 | 0.24 | 7.70 | 7.94 | 0.23 | 1.99 | 2.23 | 291 | 16,797 | 17,089 | 30.2 | 1.78 | 32.0 | 18,409 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.02 | 1.89 | 2.20 | 5.91 | 0.02 | 0.04 | 1.41 | 1.45 | 0.04 | 0.36 | 0.41 | 48.2 | 2,781 | 2,829 | 5.01 | 0.30 | 5.30 | 3,048 |

## 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 | 3.63 | 2.91 | 12.9 | 31.1 | 0.17 | 0.19 | 10.1 | 10.2 | 0.18 | 2.61 | 2.79 | — | 17,994 | 17,994 | 0.68 | 1.88 | 45.9 | 18,618 |
| Area | 8.45 | 8.29 | 0.10 | 12.0 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 49.4 | 49.4 | < 0.005 | < 0.005 | — | 49.6 |
| Energy | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 2,436 | 2,436 | 0.23 | 0.03 | — | 2,449 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 122 | 418 | 541 | 12.6 | 0.30 | — | 946 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 169 | 0.00 | 169 | 16.9 | 0.00 | — | 591 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Stationary | 3.61 | 3.28 | 9.17 | 8.37 | 0.02 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 | 0.00 | 1,679 | 1,679 | 0.07 | 0.01 | 0.00 | 1,685 |
| Total | 15.7 | 14.5 | 22.4 | 51.6 | 0.19 | 0.71 | 10.1 | 10.8 | 0.69 | 2.61 | 3.30 | 291 | 22,577 | 22,868 | 30.5 | 2.22 | 62.7 | 24,355 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 3.61 | 2.89 | 13.6 | 28.7 | 0.17 | 0.19 | 10.1 | 10.2 | 0.18 | 2.61 | 2.79 | — | 17,701 | 17,701 | 0.69 | 1.90 | 1.19 | 18,285 |
| Area | 6.32 | 6.32 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 2,436 | 2,436 | 0.23 | 0.03 | — | 2,449 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 122 | 418 | 541 | 12.6 | 0.30 | — | 946 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Waste | — | — | — | — | — | — | — | — | — | — | — | 169 | 0.00 | 169 | 16.9 | 0.00 | — | 591 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Stationa ry | 3.61 | 3.28 | 9.17 | 8.37 | 0.02 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 | 0.00 | 1,679 | 1,679 | 0.07 | 0.01 | 0.00 | 1,685 |
| Total | 13.6 | 12.5 | 22.9 | 37.3 | 0.18 | 0.69 | 10.1 | 10.7 | 0.68 | 2.61 | 3.28 | 291 | 22,235 | 22,526 | 30.5 | 2.24 | 17.9 | 23,972 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 2.79 | 2.24 | 10.5 | 22.8 | 0.13 | 0.14 | 7.70 | 7.85 | 0.14 | 1.99 | 2.13 | — | 13,679 | 13,679 | 0.53 | 1.45 | 15.3 | 14,141 |
| Area | 7.78 | 7.67 | 0.07 | 8.23 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 33.8 | 33.8 | < 0.005 | < 0.005 | — | 34.0 |
| Energy | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 2,436 | 2,436 | 0.23 | 0.03 | — | 2,449 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 122 | 418 | 541 | 12.6 | 0.30 | — | 946 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 169 | 0.00 | 169 | 16.9 | 0.00 | — | 591 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Stationa ry | 0.49 | 0.45 | 1.26 | 1.15 | < 0.005 | 0.07 | 0.00 | 0.07 | 0.07 | 0.00 | 0.07 | 0.00 | 230 | 230 | 0.01 | < 0.005 | 0.00 | 231 |
| Total | 11.1 | 10.4 | 12.1 | 32.4 | 0.13 | 0.24 | 7.70 | 7.94 | 0.23 | 1.99 | 2.23 | 291 | 16,797 | 17,089 | 30.2 | 1.78 | 32.0 | 18,409 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.51 | 0.41 | 1.92 | 4.17 | 0.02 | 0.03 | 1.41 | 1.43 | 0.03 | 0.36 | 0.39 | — | 2,265 | 2,265 | 0.09 | 0.24 | 2.53 | 2,341 |
| Area | 1.42 | 1.40 | 0.01 | 1.50 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.60 | 5.60 | < 0.005 | < 0.005 | — | 5.62 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 403 | 403 | 0.04 | < 0.005 | — | 406 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 20.3 | 69.3 | 89.5 | 2.09 | 0.05 | — | 157 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 28.0 | 0.00 | 28.0 | 2.80 | 0.00 | — | 97.8 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.77 | 2.77 |
| Stationa ry | 0.09 | 0.08 | 0.23 | 0.21 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 38.1 | 38.1 | < 0.005 | < 0.005 | 0.00 | 38.2 |
| Total | 2.02 | 1.89 | 2.20 | 5.91 | 0.02 | 0.04 | 1.41 | 1.45 | 0.04 | 0.36 | 0.41 | 48.2 | 2,781 | 2,829 | 5.01 | 0.30 | 5.30 | 3,048 |

# 3. Construction Emissions Details

## 3.1. Demolition (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.64 | 2.21 | 19.9 | 18.6 | 0.03 | 0.80 | — | 0.80 | 0.73 | — | 0.73 | — | 3,427 | 3,427 | 0.14 | 0.03 | — | 3,439 |
| Demolition | — | — | — | — | — | — | 3.49 | 3.49 | — | 0.53 | 0.53 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.13 | 1.14 | 1.07 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 197 | 197 | 0.01 | < 0.005 | — | 198 |
| Demolition | — | — | — | — | — | — | 0.20 | 0.20 | — | 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 | 0.03 | 0.02 | 0.21 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 32.6 | 32.6 | < 0.005 | < 0.005 | — | 32.8 |
| Demolition | — | — | — | — | — | — | 0.04 | 0.04 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.90 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 199 | 199 | 0.01 | 0.01 | 0.62 | 202 |
| Vendor | 0.01 | < 0.005 | 0.13 | 0.06 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 122 | 122 | 0.01 | 0.02 | 0.32 | 128 |
| Hauling | 0.74 | 0.16 | 11.9 | 4.72 | 0.07 | 0.13 | 2.79 | 2.93 | 0.13 | 0.76 | 0.90 | — | 10,042 | 10,042 | 0.50 | 1.63 | 21.4 | 10,563 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.0 | 11.0 | < 0.005 | < 0.005 | 0.02 | 11.2 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.04 | 7.04 | < 0.005 | < 0.005 | 0.01 | 7.34 |
| Hauling | 0.04 | 0.01 | 0.72 | 0.27 | < 0.005 | 0.01 | 0.16 | 0.17 | 0.01 | 0.04 | 0.05 | — | 578 | 578 | 0.03 | 0.09 | 0.53 | 607 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.83 | 1.83 | < 0.005 | < 0.005 | < 0.005 | 1.85 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.17 | 1.17 | < 0.005 | < 0.005 | < 0.005 | 1.22 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.05 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 95.7 | 95.7 | < 0.005 | 0.02 | 0.09 | 101 |

## 3.3. Site Preparation (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 | 4.34 | 3.65 | 32.7 | 30.4 | 0.05 | 1.62 | — | 1.62 | 1.49 | — | 1.49 | — | 5,533 | 5,533 | 0.22 | 0.04 | — | 5,552 |
| Dust From Material Movement | — | — | — | — | — | — | 5.66 | 5.66 | — | 2.69 | 2.69 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.99 | 0.92 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 167 | 167 | 0.01 | < 0.005 | — | 167 |
| Dust From Material Movement | — | — | — | — | — | — | 0.17 | 0.17 | — | 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 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.18 | 0.17 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 27.6 | 27.6 | < 0.005 | < 0.005 | — | 27.7 |
| Dust From Material Movement | — | — | — | — | — | — | 0.03 | 0.03 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.06 | 1.05 | 0.00 | 0.00 | 0.23 | 0.23 | 0.00 | 0.05 | 0.05 | — | 233 | 233 | 0.01 | 0.01 | 0.72 | 236 |
| Vendor | < 0.005 | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 61.1 | 61.1 | < 0.005 | 0.01 | 0.16 | 63.9 |
| 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 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 6.74 | 6.74 | < 0.005 | < 0.005 | 0.01 | 6.83 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.84 | 1.84 | < 0.005 | < 0.005 | < 0.005 | 1.92 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.12 | 1.12 | < 0.005 | < 0.005 | < 0.005 | 1.13 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.31 | 0.31 | < 0.005 | < 0.005 | < 0.005 | 0.32 |
| 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. 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.86 | 3.24 | 28.0 | 28.3 | 0.06 | 1.27 | — | 1.27 | 1.17 | — | 1.17 | — | 6,716 | 6,716 | 0.27 | 0.05 | — | 6,739 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 2.67 | 2.67 | — | 0.98 | 0.98 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.33 | 0.28 | 2.38 | 2.41 | 0.01 | 0.11 | — | 0.11 | 0.10 | — | 0.10 | — | 570 | 570 | 0.02 | < 0.005 | — | 572 |
| Dust From Material Movement | — | — | — | — | — | — | 0.23 | 0.23 | — | 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 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.05 | 0.43 | 0.44 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 94.4 | 94.4 | < 0.005 | < 0.005 | — | 94.8 |
| Dust From Material Movement | — | — | — | — | — | — | 0.04 | 0.04 | — | 0.02 | 0.02 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.08 | 0.07 | 0.07 | 1.20 | 0.00 | 0.00 | 0.26 | 0.26 | 0.00 | 0.06 | 0.06 | — | 266 | 266 | 0.01 | 0.01 | 0.83 | 270 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.01 | < 0.005 | 0.16 | 0.08 | < 0.005 | < 0.005 | 0.04 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 153 | 153 | 0.01 | 0.02 | 0.40 | 160 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 21.7 | 21.7 | < 0.005 | < 0.005 | 0.03 | 22.0 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.0 | 13.0 | < 0.005 | < 0.005 | 0.01 | 13.5 |
| 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 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.60 | 3.60 | < 0.005 | < 0.005 | 0.01 | 3.64 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.15 | 2.15 | < 0.005 | < 0.005 | < 0.005 | 2.24 |
| 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. Building Construction (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.33 | 1.11 | 10.2 | 14.0 | 0.03 | 0.36 | — | 0.36 | 0.34 | — | 0.34 | — | 2,630 | 2,630 | 0.11 | 0.02 | — | 2,639 |
| 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 | 1.33 | 1.11 | 10.2 | 14.0 | 0.03 | 0.36 | — | 0.36 | 0.34 | — | 0.34 | — | 2,630 | 2,630 | 0.11 | 0.02 | — | 2,639 |
| 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 | 0.41 | 0.34 | 3.11 | 4.29 | 0.01 | 0.11 | — | 0.11 | 0.10 | — | 0.10 | — | 803 | 803 | 0.03 | 0.01 | — | 806 |
| 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 | 0.07 | 0.06 | 0.57 | 0.78 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 133 | 133 | 0.01 | < 0.005 | — | 133 |
| 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 | 0.47 | 0.41 | 0.40 | 6.97 | 0.00 | 0.00 | 1.52 | 1.52 | 0.00 | 0.36 | 0.36 | — | 1,542 | 1,542 | 0.07 | 0.06 | 4.81 | 1,565 |
| Vendor | 0.07 | 0.03 | 1.12 | 0.53 | 0.01 | 0.01 | 0.29 | 0.30 | 0.01 | 0.08 | 0.09 | — | 1,040 | 1,040 | 0.04 | 0.14 | 2.71 | 1,086 |
| 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 | 0.46 | 0.40 | 0.50 | 5.91 | 0.00 | 0.00 | 1.52 | 1.52 | 0.00 | 0.36 | 0.36 | — | 1,462 | 1,462 | 0.02 | 0.06 | 0.12 | 1,479 |
| Vendor | 0.07 | 0.03 | 1.16 | 0.55 | 0.01 | 0.01 | 0.29 | 0.30 | 0.01 | 0.08 | 0.09 | — | 1,040 | 1,040 | 0.04 | 0.14 | 0.07 | 1,084 |
| 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 | 0.14 | 0.12 | 0.15 | 1.89 | 0.00 | 0.00 | 0.46 | 0.46 | 0.00 | 0.11 | 0.11 | — | 453 | 453 | 0.01 | 0.02 | 0.63 | 459 |
| Vendor | 0.02 | 0.01 | 0.36 | 0.16 | < 0.005 | < 0.005 | 0.09 | 0.09 | < 0.005 | 0.02 | 0.03 | — | 317 | 317 | 0.01 | 0.04 | 0.36 | 331 |
| 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 | 0.03 | 0.02 | 0.03 | 0.35 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 75.0 | 75.0 | < 0.005 | < 0.005 | 0.10 | 75.9 |
| Vendor | < 0.005 | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | < 0.005 | — | 52.6 | 52.6 | < 0.005 | 0.01 | 0.06 | 54.8 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.9. Building Construction (2028) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.66 | 14.0 | 0.03 | 0.33 | — | 0.33 | 0.30 | — | 0.30 | — | 2,630 | 2,630 | 0.11 | 0.02 | — | 2,639 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.66 | 14.0 | 0.03 | 0.33 | — | 0.33 | 0.30 | — | 0.30 | — | 2,630 | 2,630 | 0.11 | 0.02 | — | 2,639 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road | 0.30 | 0.25 | 2.25 | 3.27 | 0.01 | 0.08 | — | 0.08 | 0.07 | — | 0.07 | — | 612 | 612 | 0.02 | < 0.005 | — | 615 |
| 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 | 0.05 | 0.41 | 0.60 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 101 | 101 | < 0.005 | < 0.005 | — | 102 |
| 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 | 0.45 | 0.40 | 0.40 | 6.55 | 0.00 | 0.00 | 1.52 | 1.52 | 0.00 | 0.36 | 0.36 | — | 1,515 | 1,515 | 0.02 | 0.06 | 4.32 | 1,536 |
| Vendor | 0.07 | 0.02 | 1.07 | 0.51 | 0.01 | 0.01 | 0.29 | 0.30 | 0.01 | 0.08 | 0.09 | — | 1,015 | 1,015 | 0.04 | 0.14 | 2.57 | 1,061 |
| 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 | 0.45 | 0.39 | 0.45 | 5.57 | 0.00 | 0.00 | 1.52 | 1.52 | 0.00 | 0.36 | 0.36 | — | 1,436 | 1,436 | 0.02 | 0.06 | 0.11 | 1,453 |
| Vendor | 0.07 | 0.02 | 1.11 | 0.52 | 0.01 | 0.01 | 0.29 | 0.30 | 0.01 | 0.08 | 0.09 | — | 1,016 | 1,016 | 0.04 | 0.14 | 0.07 | 1,060 |
| 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 | 1.36 | 0.00 | 0.00 | 0.35 | 0.35 | 0.00 | 0.08 | 0.08 | — | 339 | 339 | < 0.005 | 0.01 | 0.44 | 344 |
| Vendor | 0.02 | 0.01 | 0.26 | 0.12 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 236 | 236 | 0.01 | 0.03 | 0.26 | 247 |
| 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 | 0.25 | 0.00 | 0.00 | 0.06 | 0.06 | 0.00 | 0.01 | 0.01 | — | 56.2 | 56.2 | < 0.005 | < 0.005 | 0.07 | 56.9 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 39.2 | 39.2 | < 0.005 | 0.01 | 0.04 | 40.9 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.11. Paving (2028) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.82 | 0.69 | 6.63 | 9.91 | 0.01 | 0.26 | — | 0.26 | 0.24 | — | 0.24 | — | 1,511 | 1,511 | 0.06 | 0.01 | — | 1,516 |
| Paving | 1.00 | 1.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.36 | 0.54 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 82.8 | 82.8 | < 0.005 | < 0.005 | — | 83.1 |
| Paving | 0.06 | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.07 | 0.10 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 13.7 | 13.7 | < 0.005 | < 0.005 | — | 13.8 |
| Paving | 0.01 | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.85 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 196 | 196 | < 0.005 | 0.01 | 0.56 | 198 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 10.3 | 10.3 | < 0.005 | < 0.005 | 0.01 | 10.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.71 | 1.71 | < 0.005 | < 0.005 | < 0.005 | 1.73 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.13. 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 | 45.8 | 45.8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 |
| Daily, Winter (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 | 45.8 | 45.8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.6 | 14.6 | < 0.005 | < 0.005 | — | 14.7 |
| Architectural Coatings | 3.76 | 3.76 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 Equipm | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 2.42 | 2.42 | < 0.005 | < 0.005 | — | 2.43 |
| Architectural Coatings | 0.69 | 0.69 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.08 | 1.31 | 0.00 | 0.00 | 0.30 | 0.30 | 0.00 | 0.07 | 0.07 | — | 303 | 303 | < 0.005 | 0.01 | 0.86 | 307 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.09 | 1.11 | 0.00 | 0.00 | 0.30 | 0.30 | 0.00 | 0.07 | 0.07 | — | 287 | 287 | < 0.005 | 0.01 | 0.02 | 291 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | 0.03 | 24.3 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.97 | 3.97 | < 0.005 | < 0.005 | 0.01 | 4.02 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.1. 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | 0.42 | 0.15 | 6.69 | 3.01 | 0.06 | 0.09 | 2.25 | 2.34 | 0.09 | 0.60 | 0.69 | — | 6,935 | 6,935 | 0.26 | 1.00 | 17.6 | 7,257 |
| Unrefrigerated Warehouse-No Rail | 0.31 | 0.10 | 4.90 | 2.19 | 0.05 | 0.07 | 1.63 | 1.70 | 0.06 | 0.44 | 0.50 | — | 5,038 | 5,038 | 0.19 | 0.73 | 12.7 | 5,274 |
| 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 |
| 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 |
| User Defined Industrial | 2.90 | 2.66 | 1.34 | 25.9 | 0.06 | 0.03 | 6.18 | 6.21 | 0.03 | 1.56 | 1.59 | — | 6,021 | 6,021 | 0.23 | 0.15 | 15.6 | 6,087 |
| Total | 3.63 | 2.91 | 12.9 | 31.1 | 0.17 | 0.19 | 10.1 | 10.2 | 0.18 | 2.61 | 2.79 | — | 17,994 | 17,994 | 0.68 | 1.88 | 45.9 | 18,618 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | 0.41 | 0.14 | 6.96 | 3.03 | 0.06 | 0.09 | 2.25 | 2.34 | 0.09 | 0.60 | 0.69 | — | 6,936 | 6,936 | 0.26 | 1.00 | 0.46 | 7,242 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No | 0.30 | 0.10 | 5.09 | 2.20 | 0.05 | 0.07 | 1.63 | 1.70 | 0.06 | 0.44 | 0.50 | — | 5,040 | 5,040 | 0.19 | 0.73 | 0.33 | 5,263 |
| 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 |
| 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 |
| User Defined Industrial | 2.89 | 2.65 | 1.52 | 23.5 | 0.06 | 0.03 | 6.18 | 6.21 | 0.03 | 1.56 | 1.59 | — | 5,725 | 5,725 | 0.24 | 0.16 | 0.41 | 5,780 |
| Total | 3.61 | 2.89 | 13.6 | 28.7 | 0.17 | 0.19 | 10.1 | 10.2 | 0.18 | 2.61 | 2.79 | — | 17,701 | 17,701 | 0.69 | 1.90 | 1.19 | 18,285 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | 0.06 | 0.02 | 1.01 | 0.43 | 0.01 | 0.01 | 0.32 | 0.33 | 0.01 | 0.09 | 0.10 | — | 906 | 906 | 0.03 | 0.13 | 0.99 | 946 |
| Unrefrigerated Warehouse-No Rail | 0.04 | 0.01 | 0.69 | 0.29 | 0.01 | 0.01 | 0.22 | 0.23 | 0.01 | 0.06 | 0.07 | — | 610 | 610 | 0.02 | 0.09 | 0.67 | 638 |
| 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 |
| 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 |
| User Defined Industrial | 0.41 | 0.37 | 0.22 | 3.44 | 0.01 | < 0.005 | 0.87 | 0.87 | < 0.005 | 0.22 | 0.22 | — | 749 | 749 | 0.03 | 0.02 | 0.87 | 757 |
| Total | 0.51 | 0.41 | 1.92 | 4.17 | 0.02 | 0.03 | 1.41 | 1.43 | 0.03 | 0.36 | 0.39 | — | 2,265 | 2,265 | 0.09 | 0.24 | 2.53 | 2,341 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | — | — | — | — | — | — | — | — | — | — | — | — | 1,629 | 1,629 | 0.16 | 0.02 | — | 1,638 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 432 | 432 | 0.04 | < 0.005 | — | 434 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 132 | 132 | 0.01 | < 0.005 | — | 133 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 2,192 | 2,192 | 0.21 | 0.03 | — | 2,205 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | — | — | — | — | — | — | — | — | — | — | — | — | 1,629 | 1,629 | 0.16 | 0.02 | — | 1,638 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 432 | 432 | 0.04 | < 0.005 | — | 434 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 132 | 132 | 0.01 | < 0.005 | — | 133 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 2,192 | 2,192 | 0.21 | 0.03 | — | 2,205 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | — | — | — | — | — | — | — | — | — | — | — | — | 270 | 270 | 0.03 | < 0.005 | — | 271 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 71.5 | 71.5 | 0.01 | < 0.005 | — | 71.9 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 21.8 | 21.8 | < 0.005 | < 0.005 | — | 21.9 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 363 | 363 | 0.03 | < 0.005 | — | 365 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 244 | 244 | 0.02 | < 0.005 | — | 244 |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0.00 | 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 |
| 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 |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 244 | 244 | 0.02 | < 0.005 | — | 244 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 244 | 244 | 0.02 | < 0.005 | — | 244 |
| Unrefrig erated Wareho use-No Rail | 0.00 | 0.00 | 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 |
| 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 |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.02 | 0.01 | 0.20 | 0.17 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 244 | 244 | 0.02 | < 0.005 | — | 244 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 40.3 | 40.3 | < 0.005 | < 0.005 | — | 40.5 |
| Unrefrig erated Wareho use-No Rail | 0.00 | 0.00 | 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 |
| 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 |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 40.3 | 40.3 | < 0.005 | < 0.005 | — | 40.5 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 5.94 | 5.94 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.38 | 0.38 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 2.14 | 1.97 | 0.10 | 12.0 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 49.4 | 49.4 | < 0.005 | < 0.005 | — | 49.6 |
| Total | 8.45 | 8.29 | 0.10 | 12.0 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 49.4 | 49.4 | < 0.005 | < 0.005 | — | 49.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer | 5.94 | 5.94 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.38 | 0.38 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 6.32 | 6.32 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 1.08 | 1.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.07 | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.27 | 0.25 | 0.01 | 1.50 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.60 | 5.60 | < 0.005 | < 0.005 | — | 5.62 |
| Total | 1.42 | 1.40 | 0.01 | 1.50 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.60 | 5.60 | < 0.005 | < 0.005 | — | 5.62 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | — | — | — | — | — | — | — | — | — | — | — | 79.3 | 271 | 350 | 8.16 | 0.20 | — | 613 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Wareho Rail | — | — | — | — | — | — | — | — | — | — | — | 43.1 | 147 | 190 | 4.44 | 0.11 | — | 333 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 122 | 418 | 541 | 12.6 | 0.30 | — | 946 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | — | — | — | — | — | — | — | — | — | — | — | 79.3 | 271 | 350 | 8.16 | 0.20 | — | 613 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 43.1 | 147 | 190 | 4.44 | 0.11 | — | 333 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 122 | 418 | 541 | 12.6 | 0.30 | — | 946 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufacturing | — | — | — | — | — | — | — | — | — | — | — | 13.1 | 44.9 | 58.0 | 1.35 | 0.03 | — | 101 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrig erated Wareho Rail | — | — | — | — | — | — | — | — | — | — | — | 7.14 | 24.4 | 31.5 | 0.73 | 0.02 | — | 55.2 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 20.3 | 69.3 | 89.5 | 2.09 | 0.05 | — | 157 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | — | — | — | — | — | — | — | — | — | — | — | 120 | 0.00 | 120 | 12.0 | 0.00 | — | 419 |
| Unrefrig erated Wareho use-No Rail | — | — | — | — | — | — | — | — | — | — | — | 49.3 | 0.00 | 49.3 | 4.93 | 0.00 | — | 172 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 169 | 0.00 | 169 | 16.9 | 0.00 | — | 591 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | — | — | — | — | — | — | — | — | — | — | — | 120 | 0.00 | 120 | 12.0 | 0.00 | — | 419 |
| Unrefrig erated Wareho use-No Rail | — | — | — | — | — | — | — | — | — | — | — | 49.3 | 0.00 | 49.3 | 4.93 | 0.00 | — | 172 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 169 | 0.00 | 169 | 16.9 | 0.00 | — | 591 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | — | — | — | — | — | — | — | — | — | — | — | 19.8 | 0.00 | 19.8 | 1.98 | 0.00 | — | 69.3 |
| Unrefrig erated Wareho use-No Rail | — | — | — | — | — | — | — | — | — | — | — | 8.16 | 0.00 | 8.16 | 0.82 | 0.00 | — | 28.6 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 28.0 | 0.00 | 28.0 | 2.80 | 0.00 | — | 97.8 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 16.7 | 16.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Manufac turing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.77 | 2.77 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.77 | 2.77 |

## 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)

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 2.52 | 2.30 | 6.42 | 5.86 | 0.01 | 0.34 | 0.00 | 0.34 | 0.34 | 0.00 | 0.34 | 0.00 | 1,175 | 1,175 | 0.05 | 0.01 | 0.00 | 1,179 |
| Fire Pump | 1.08 | 0.98 | 2.75 | 2.51 | < 0.005 | 0.14 | 0.00 | 0.14 | 0.14 | 0.00 | 0.14 | 0.00 | 504 | 504 | 0.02 | < 0.005 | 0.00 | 505 |
| Total | 3.61 | 3.28 | 9.17 | 8.37 | 0.02 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 | 0.00 | 1,679 | 1,679 | 0.07 | 0.01 | 0.00 | 1,685 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency | 2.52 | 2.30 | 6.42 | 5.86 | 0.01 | 0.34 | 0.00 | 0.34 | 0.34 | 0.00 | 0.34 | 0.00 | 1,175 | 1,175 | 0.05 | 0.01 | 0.00 | 1,179 |
| Fire Pump | 1.08 | 0.98 | 2.75 | 2.51 | < 0.005 | 0.14 | 0.00 | 0.14 | 0.14 | 0.00 | 0.14 | 0.00 | 504 | 504 | 0.02 | < 0.005 | 0.00 | 505 |
| Total | 3.61 | 3.28 | 9.17 | 8.37 | 0.02 | 0.48 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 | 0.00 | 1,679 | 1,679 | 0.07 | 0.01 | 0.00 | 1,685 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.06 | 0.06 | 0.16 | 0.15 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 26.7 | 26.7 | < 0.005 | < 0.005 | 0.00 | 26.7 |
| Fire Pump | 0.03 | 0.02 | 0.07 | 0.06 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | 0.00 | 11.4 | 11.4 | < 0.005 | < 0.005 | 0.00 | 11.5 |
| Total | 0.09 | 0.08 | 0.23 | 0.21 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 38.1 | 38.1 | < 0.005 | < 0.005 | 0.00 | 38.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

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

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

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

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

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

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

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

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

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

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Demolition | Demolition | 5/3/2027 | 5/31/2027 | 5.00 | 21.0 | 20 |
| Site Preparation | Site Preparation | 6/1/2027 | 6/15/2027 | 5.00 | 11.0 | 10 |
| Grading | Grading | 6/16/2027 | 7/28/2027 | 5.00 | 31.0 | 30 |
| Building Construction | Building Construction | 7/29/2027 | 4/28/2028 | 5.00 | 197 | 300 |
| Paving | Paving | 4/3/2028 | 4/28/2028 | 5.00 | 20.0 | 20 |
| Architectural Coating | Architectural Coating | 3/20/2028 | 4/28/2028 | 5.00 | 30.0 | 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 |
|---|---|---|---|---|---|---|---|
| Demolition | Rubber Tired Dozers | Diesel | Average | 2.00 | 8.00 | 367 | 0.40 |
| Demolition | Excavators | Diesel | Average | 3.00 | 8.00 | 36.0 | 0.38 |
| Demolition | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Crawler Tractors | Diesel | Average | 4.00 | 8.00 | 87.0 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Crawler Tractors | Diesel | Average | 2.00 | 8.00 | 87.0 | 0.43 |
| Grading | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Building Construction | Forklifts | Diesel | Average | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 8.00 | 367 | 0.29 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 8.00 | 84.0 | 0.37 |
| Paving | Pavers | Diesel | Average | 2.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 2.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Architectural Coating | Air Compressors | Diesel | Average | 1.00 | 8.00 | 37.0 | 0.48 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Demolition | — | — | — | — |
| Demolition | Worker | 15.0 | 18.5 | LDA,LDT1,LDT2 |
| Demolition | Vendor | 4.00 | 10.2 | HHDT,MHDT |
| Demolition | Hauling | 151 | 20.0 | HHDT |
| Demolition | Onsite truck | — | — | HHDT |
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 18.5 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | 2.00 | 10.2 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |

| | | | | |
|---|---|---|---|---|
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 18.5 | LDA,LDT1,LDT2 |
| Grading | Vendor | 5.00 | 10.2 | HHDT,MHDT |
| Grading | Hauling | 0.00 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 116 | 18.5 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 34.0 | 10.2 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 18.5 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 10.2 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 23.2 | 18.5 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 10.2 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 0.00 | 0.00 | 414,450 | 138,150 | 20,046 |

# 5.6. Dust Mitigation

## 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Demolition | 0.00 | 0.00 | 0.00 | 275,000 | — |
| Site Preparation | — | — | 38.5 | 0.00 | — |
| Grading | — | — | 124 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 7.67 |

## 5.6.2. Construction Earthmoving Control Strategies

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

# 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Manufacturing | 0.00 | 0% |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0% |
| Other Asphalt Surfaces | 4.03 | 100% |
| Parking Lot | 3.64 | 100% |
| User Defined Industrial | 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 | 346 | 0.03 | < 0.005 |
| 2028 | 0.00 | 346 | 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 |
|---|---|---|---|---|---|---|---|---|
| Manufacturing | 84.0 | 26.3 | 17.4 | 24,165 | 2,543 | 797 | 526 | 731,946 |
| Unrefrigerated Warehouse-No Rail | 60.0 | 5.25 | 2.04 | 16,032 | 1,841 | 161 | 62.6 | 491,549 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| User Defined Industrial | 878 | 242 | 157 | 249,732 | 8,824 | 2,429 | 1,580 | 2,509,471 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 414,450 | 138,150 | 20,046 |

### 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) |
|---|---|---|---|---|---|
| Manufacturing | 1,717,100 | 346 | 0.0330 | 0.0040 | 760,394 |
| Unrefrigerated Warehouse-No Rail | 455,399 | 346 | 0.0330 | 0.0040 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 346 | 0.0330 | 0.0040 | 0.00 |
| Parking Lot | 138,897 | 346 | 0.0330 | 0.0040 | 0.00 |
| User Defined Industrial | 0.00 | 346 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Manufacturing | 41,393,750 | 747,510 |
| Unrefrigerated Warehouse-No Rail | 22,500,625 | 402,506 |
| Other Asphalt Surfaces | 0.00 | 0.00 |
| Parking Lot | 0.00 | 0.00 |
| User Defined Industrial | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Manufacturing | 222 | — |
| Unrefrigerated Warehouse-No Rail | 91.5 | — |
| Other Asphalt Surfaces | 0.00 | — |
| Parking Lot | 0.00 | — |
| User Defined Industrial | 0.00 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| Industrial Park | Other commercial A/C and heat pumps | User Defined | 750 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

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

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 1.00 | 1.00 | 50.0 | 700 | 0.73 |
| Fire Pump | Diesel | 1.00 | 1.00 | 50.0 | 300 | 0.73 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 1.00 | 1.00 | 50.0 | 700 | 0.73 |
| Fire Pump | Diesel | 1.00 | 1.00 | 50.0 | 300 | 0.73 |

### 5.16.2. Process Boilers

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

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

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

| Climate Hazard | Result for Project Location | Unit |
|---|---|---|
| Temperature and Extreme Heat | 4.89 | annual days of extreme heat |
| Extreme Precipitation | 4.25 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | annual hectares burned |

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

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | 1 | 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 | 1 | 1 | 1 | 2 |
| 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 | 24.9 |
| AQ-PM | 81.5 |

| | |
|---|---|
| AQ-DPM | 48.7 |
| Drinking Water | — |
| Lead Risk Housing | — |
| Pesticides | 54.7 |
| Toxic Releases | 99.7 |
| Traffic | 68.1 |
| Effect Indicators | — |
| CleanUp Sites | 97.1 |
| Groundwater | 96.2 |
| Haz Waste Facilities/Generators | 99.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 39.3 |
| Sensitive Population | — |
| Asthma | — |
| Cardio-vascular | — |
| Low Birth Weights | — |
| Socioeconomic Factor Indicators | — |
| Education | — |
| Housing | — |
| Linguistic | — |
| Poverty | — |
| Unemployment | — |

## 7.2. Healthy Places Index Scores

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

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | — |
| Above Poverty | — |

| | |
|---|---|
| Employed | — |
| Median HI | — |
| Education | — |
| Bachelor's or higher | — |
| High school enrollment | — |
| Preschool enrollment | — |
| Transportation | — |
| Auto Access | — |
| Active commuting | — |
| Social | — |
| 2-parent households | — |
| Voting | — |
| Neighborhood | — |
| Alcohol availability | — |
| Park access | — |
| Retail density | — |
| Supermarket access | — |
| Tree canopy | — |
| Housing | — |
| Homeownership | — |
| Housing habitability | — |
| Low-inc homeowner severe housing cost burden | — |
| Low-inc renter severe housing cost burden | — |
| Uncrowded housing | — |
| Health Outcomes | — |
| Insured adults | — |
| Arthritis | 0.0 |
| Asthma ER Admissions | 99.9 |

| | |
|---|---|
| High Blood Pressure | 0.0 |
| Cancer (excluding skin) | 0.0 |
| Asthma | 0.0 |
| Coronary Heart Disease | 0.0 |
| Chronic Obstructive Pulmonary Disease | 0.0 |
| Diagnosed Diabetes | 0.0 |
| Life Expectancy at Birth | 0.0 |
| Cognitively Disabled | 0.0 |
| Physically Disabled | 0.0 |
| Heart Attack ER Admissions | 99.9 |
| Mental Health Not Good | 0.0 |
| Chronic Kidney Disease | 0.0 |
| Obesity | 0.0 |
| Pedestrian Injuries | 0.0 |
| Physical Health Not Good | 0.0 |
| Stroke | 0.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 0.0 |
| Current Smoker | 0.0 |
| No Leisure Time for Physical Activity | 0.0 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 0.0 |
| Elderly | 0.0 |
| English Speaking | 0.0 |
| Foreign-born | 0.0 |
| Outdoor Workers | 0.0 |

| | |
|---|---|
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 0.0 |
| Traffic Density | 0.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 0.0 |
| Other Decision Support | — |
| 2016 Voting | 0.0 |

## 7.3. Overall Health & Equity Scores

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

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

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|

| | |
|---|---|
| Construction: Construction Phases | Schedule based information provided by Project Applicant |
| Operations: Vehicle Data | Trip characteristics based on information provided in the Trip Generation. |
| Operations: Fleet Mix | Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks |
| Operations: Architectural Coatings | SCAQMD Rule 1113 |
| Operations: Refrigerants | Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater. |
| Operations: Energy Use | Project will not utilize natural gas for warehouse and manufacturing portion of the building. Natural Gas will be utilized for small office portion of the building (30,000 SF), as such NG estimates based on CalEEMod default NG usage for General Office Building |
| Land Use | Based on site plan and split between manufacturing and warehousing use |
| Construction: Off-Road Equipment | T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases<br>Standard 8-hour work days |
| Construction: Trips and VMT | Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction |
| Construction: Architectural Coatings | SCAQMD Rule 1113 |

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# APPENDIX 4.2:

# CALEEMOD EXISTING USE EMISSIONS MODEL OUTPUTS

# 15795 - Sequoia Commerce Center (Existing) Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 15795 - Sequoia Commerce Center (Existing) |
| Operational Year | 2024 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.50 |
| Precipitation (days) | 17.4 |
| Location | 2172 W 190th St, Torrance, CA 90501, USA |
| County | Los Angeles-South Coast |
| City | Torrance |
| Air District | South Coast AQMD |
| Air Basin | South Coast |
| TAZ | 4669 |
| EDFZ | 7 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.26 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 275 | 1000sqft | 6.31 | 275,000 | 0.00 | — | — | Trucks |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 7.70 | Acre | 7.70 | 0.00 | 0.00 | — | — | — |
| User Defined Industrial | 275 | User Defined Unit | 0.00 | 0.00 | 0.00 | — | — | PC |

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

No measures selected

# 2. Emissions Summary

## 2.4. Operations Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 13.7 | 12.9 | 7.30 | 57.2 | 0.13 | 0.22 | 9.71 | 9.94 | 0.21 | 2.49 | 2.70 | 261 | 15,294 | 15,555 | 27.2 | 0.89 | 55.9 | 16,557 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 11.5 | 10.9 | 7.66 | 41.5 | 0.12 | 0.20 | 9.71 | 9.92 | 0.20 | 2.49 | 2.69 | 261 | 14,830 | 15,092 | 27.2 | 0.91 | 1.45 | 16,045 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 11.6 | 11.1 | 6.05 | 39.2 | 0.09 | 0.19 | 6.93 | 7.12 | 0.18 | 1.78 | 1.96 | 261 | 11,739 | 12,001 | 27.1 | 0.75 | 17.4 | 12,918 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.12 | 2.02 | 1.10 | 7.16 | 0.02 | 0.03 | 1.26 | 1.30 | 0.03 | 0.32 | 0.36 | 43.2 | 1,944 | 1,987 | 4.48 | 0.12 | 2.88 | 2,139 |

## 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 | 4.75 | 4.26 | 5.78 | 44.0 | 0.12 | 0.09 | 9.71 | 9.81 | 0.09 | 2.49 | 2.58 | — | 11,903 | 11,903 | 0.44 | 0.57 | 55.9 | 12,141 |
| Area | 8.76 | 8.60 | 0.10 | 12.0 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 49.2 | 49.2 | < 0.005 | < 0.005 | — | 49.4 |
| Energy | 0.16 | 0.08 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 2,928 | 2,928 | 0.27 | 0.02 | — | 2,940 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |
| Total | 13.7 | 12.9 | 7.30 | 57.2 | 0.13 | 0.22 | 9.71 | 9.94 | 0.21 | 2.49 | 2.70 | 261 | 15,294 | 15,555 | 27.2 | 0.89 | 55.9 | 16,557 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 4.73 | 4.23 | 6.23 | 40.3 | 0.11 | 0.10 | 9.71 | 9.81 | 0.09 | 2.49 | 2.58 | — | 11,489 | 11,489 | 0.46 | 0.59 | 1.45 | 11,679 |
| Area | 6.64 | 6.64 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.16 | 0.08 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 2,928 | 2,928 | 0.27 | 0.02 | — | 2,940 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |
| Total | 11.5 | 10.9 | 7.66 | 41.5 | 0.12 | 0.20 | 9.71 | 9.92 | 0.20 | 2.49 | 2.69 | 261 | 14,830 | 15,092 | 27.2 | 0.91 | 1.45 | 16,045 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 3.38 | 3.03 | 4.55 | 29.8 | 0.08 | 0.07 | 6.93 | 7.00 | 0.06 | 1.78 | 1.84 | — | 8,364 | 8,364 | 0.33 | 0.43 | 17.4 | 8,518 |
| Area | 8.09 | 7.98 | 0.07 | 8.19 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 33.7 | 33.7 | < 0.005 | < 0.005 | — | 33.8 |
| Energy | 0.16 | 0.08 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 2,928 | 2,928 | 0.27 | 0.02 | — | 2,940 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |
| Total | 11.6 | 11.1 | 6.05 | 39.2 | 0.09 | 0.19 | 6.93 | 7.12 | 0.18 | 1.78 | 1.96 | 261 | 11,739 | 12,001 | 27.1 | 0.75 | 17.4 | 12,918 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.62 | 0.55 | 0.83 | 5.44 | 0.01 | 0.01 | 1.26 | 1.28 | 0.01 | 0.32 | 0.34 | — | 1,385 | 1,385 | 0.05 | 0.07 | 2.88 | 1,410 |
| Area | 1.48 | 1.46 | 0.01 | 1.49 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.58 | 5.58 | < 0.005 | < 0.005 | — | 5.60 |
| Energy | 0.03 | 0.01 | 0.26 | 0.22 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 485 | 485 | 0.04 | < 0.005 | — | 487 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | — | — | — | — | — | — | — | — | — | — | — | 20.2 | 68.5 | 88.6 | 2.08 | 0.05 | — | 155 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 23.1 | 0.00 | 23.1 | 2.31 | 0.00 | — | 80.7 |
| Total | 2.12 | 2.02 | 1.10 | 7.16 | 0.02 | 0.03 | 1.26 | 1.30 | 0.03 | 0.32 | 0.36 | 43.2 | 1,944 | 1,987 | 4.48 | 0.12 | 2.88 | 2,139 |

# 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | 0.42 | 0.31 | 3.46 | 3.88 | 0.03 | 0.05 | 1.83 | 1.88 | 0.05 | 0.49 | 0.54 | — | 3,578 | 3,578 | 0.08 | 0.34 | 24.1 | 3,707 |
| 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 |
| User Defined Industrial | 4.33 | 3.95 | 2.31 | 40.1 | 0.08 | 0.05 | 7.88 | 7.93 | 0.04 | 1.99 | 2.04 | — | 8,325 | 8,325 | 0.36 | 0.23 | 31.8 | 8,434 |
| Total | 4.75 | 4.26 | 5.78 | 44.0 | 0.12 | 0.09 | 9.71 | 9.81 | 0.09 | 2.49 | 2.58 | — | 11,903 | 11,903 | 0.44 | 0.57 | 55.9 | 12,141 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | 0.42 | 0.30 | 3.62 | 3.85 | 0.03 | 0.05 | 1.83 | 1.88 | 0.05 | 0.49 | 0.54 | — | 3,579 | 3,579 | 0.08 | 0.35 | 0.63 | 3,685 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |
| User Defined Industrial | 4.31 | 3.93 | 2.61 | 36.4 | 0.08 | 0.05 | 7.88 | 7.93 | 0.04 | 1.99 | 2.04 | — | 7,910 | 7,910 | 0.38 | 0.25 | 0.82 | 7,994 |
| Total | 4.73 | 4.23 | 6.23 | 40.3 | 0.11 | 0.10 | 9.71 | 9.81 | 0.09 | 2.49 | 2.58 | — | 11,489 | 11,489 | 0.46 | 0.59 | 1.45 | 11,679 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | 0.05 | 0.04 | 0.48 | 0.51 | < 0.005 | 0.01 | 0.24 | 0.25 | 0.01 | 0.06 | 0.07 | — | 427 | 427 | 0.01 | 0.04 | 1.24 | 441 |
| 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 |
| User Defined Industrial | 0.56 | 0.51 | 0.35 | 4.94 | 0.01 | 0.01 | 1.03 | 1.03 | 0.01 | 0.26 | 0.26 | — | 958 | 958 | 0.04 | 0.03 | 1.64 | 969 |
| Total | 0.62 | 0.55 | 0.83 | 5.44 | 0.01 | 0.01 | 1.26 | 1.28 | 0.01 | 0.32 | 0.34 | — | 1,385 | 1,385 | 0.05 | 0.07 | 2.88 | 1,410 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 1,229 | 1,229 | 0.12 | 0.01 | — | 1,237 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,229 | 1,229 | 0.12 | 0.01 | — | 1,237 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 1,229 | 1,229 | 0.12 | 0.01 | — | 1,237 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,229 | 1,229 | 0.12 | 0.01 | — | 1,237 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 204 | 204 | 0.02 | < 0.005 | — | 205 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 204 | 204 | 0.02 | < 0.005 | — | 205 |

### 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | 0.16 | 0.08 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,699 | 1,699 | 0.15 | < 0.005 | — | 1,704 |
| 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 |
| User Defined Industrial | 0.00 | 0.00 | 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 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,699 | 1,699 | 0.15 | < 0.005 | — | 1,704 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | 0.16 | 0.08 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,699 | 1,699 | 0.15 | < 0.005 | — | 1,704 |
| 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 |
| User Defined Industrial | 0.00 | 0.00 | 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 | 1.42 | 1.20 | 0.01 | 0.11 | — | 0.11 | 0.11 | — | 0.11 | — | 1,699 | 1,699 | 0.15 | < 0.005 | — | 1,704 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated | 0.03 | 0.01 | 0.26 | 0.22 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 281 | 281 | 0.02 | < 0.005 | — | 282 |
| 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 |
| User Defined Industrial | 0.00 | 0.00 | 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 | 0.22 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 281 | 281 | 0.02 | < 0.005 | — | 282 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 5.91 | 5.91 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.72 | 0.72 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 2.13 | 1.96 | 0.10 | 12.0 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 49.2 | 49.2 | < 0.005 | < 0.005 | — | 49.4 |
| Total | 8.76 | 8.60 | 0.10 | 12.0 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 49.2 | 49.2 | < 0.005 | < 0.005 | — | 49.4 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer | 5.91 | 5.91 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.72 | 0.72 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 6.64 | 6.64 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 1.08 | 1.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.13 | 0.13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.27 | 0.25 | 0.01 | 1.49 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.58 | 5.58 | < 0.005 | < 0.005 | — | 5.60 |
| Total | 1.48 | 1.46 | 0.01 | 1.49 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.58 | 5.58 | < 0.005 | < 0.005 | — | 5.60 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 122 | 413 | 535 | 12.5 | 0.30 | — | 939 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 20.2 | 68.5 | 88.6 | 2.08 | 0.05 | — | 155 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 20.2 | 68.5 | 88.6 | 2.08 | 0.05 | — | 155 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 139 | 0.00 | 139 | 13.9 | 0.00 | — | 487 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 23.1 | 0.00 | 23.1 | 2.31 | 0.00 | — | 80.7 |
| Other Asphalt Surfaces | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| User Defined Industrial | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 23.1 | 0.00 | 23.1 | 2.31 | 0.00 | — | 80.7 |

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

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

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

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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

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

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

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

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

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

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

# 5. Activity Data

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 115 | 3.85 | 1.65 | 30,256 | 2,119 | 71.0 | 30.4 | 557,616 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| User Defined Industrial | 1,120 | 37.4 | 14.9 | 294,744 | 11,255 | 376 | 149 | 2,961,779 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 412,500 | 137,500 | 20,125 |

### 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) |
|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 1,287,100 | 349 | 0.0330 | 0.0040 | 5,300,940 |
| Other Asphalt Surfaces | 0.00 | 349 | 0.0330 | 0.0040 | 0.00 |
| User Defined Industrial | 0.00 | 349 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Unrefrigerated Warehouse-No Rail | 63,593,750 | 0.00 |
| Other Asphalt Surfaces | 0.00 | 0.00 |
| User Defined Industrial | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Unrefrigerated Warehouse-No Rail | 259 | — |
| Other Asphalt Surfaces | 0.00 | — |
| User Defined Industrial | 0.00 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

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

## 5.15. Operational Off-Road Equipment

#### 5.15.1. Unmitigated

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

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

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

### 5.16.2. Process Boilers

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

## 5.17. User Defined

| Equipment Type | Fuel Type |
| --- | --- |

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
| --- | --- | --- | --- |

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
| --- | --- | --- |

### 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

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

# 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

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

| Climate Hazard | Result for Project Location | Unit |
|---|---|---|
| Temperature and Extreme Heat | 4.89 | annual days of extreme heat |
| Extreme Precipitation | 4.25 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 0.00 | annual hectares burned |

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

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | 1 | 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 | 1 | 1 | 1 | 2 |
| 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 | 24.9 |
| AQ-PM | 81.5 |
| AQ-DPM | 48.7 |
| Drinking Water | — |
| Lead Risk Housing | — |
| Pesticides | 54.7 |
| Toxic Releases | 99.7 |
| Traffic | 68.1 |
| Effect Indicators | — |
| CleanUp Sites | 97.1 |
| Groundwater | 96.2 |
| Haz Waste Facilities/Generators | 99.8 |
| Impaired Water Bodies | 0.00 |
| Solid Waste | 39.3 |
| Sensitive Population | — |
| Asthma | — |
| Cardio-vascular | — |
| Low Birth Weights | — |
| Socioeconomic Factor Indicators | — |
| Education | — |
| Housing | — |
| Linguistic | — |
| Poverty | — |
| Unemployment | — |

## 7.2. Healthy Places Index Scores

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

| Indicator | Result for Project Census Tract |
|---|---|
| Economic | — |
| Above Poverty | — |
| Employed | — |
| Median HI | — |
| Education | — |
| Bachelor's or higher | — |
| High school enrollment | — |
| Preschool enrollment | — |
| Transportation | — |
| Auto Access | — |
| Active commuting | — |
| Social | — |
| 2-parent households | — |
| Voting | — |
| Neighborhood | — |
| Alcohol availability | — |
| Park access | — |
| Retail density | — |
| Supermarket access | — |
| Tree canopy | — |
| Housing | — |
| Homeownership | — |
| Housing habitability | — |
| Low-inc homeowner severe housing cost burden | — |
| Low-inc renter severe housing cost burden | — |

| | |
|---|---|
| Uncrowded housing | — |
| Health Outcomes | — |
| Insured adults | — |
| Arthritis | 0.0 |
| Asthma ER Admissions | 99.9 |
| High Blood Pressure | 0.0 |
| Cancer (excluding skin) | 0.0 |
| Asthma | 0.0 |
| Coronary Heart Disease | 0.0 |
| Chronic Obstructive Pulmonary Disease | 0.0 |
| Diagnosed Diabetes | 0.0 |
| Life Expectancy at Birth | 0.0 |
| Cognitively Disabled | 0.0 |
| Physically  Disabled | 0.0 |
| Heart Attack ER Admissions | 99.9 |
| Mental Health Not Good | 0.0 |
| Chronic Kidney Disease | 0.0 |
| Obesity | 0.0 |
| Pedestrian Injuries | 0.0 |
| Physical Health Not Good | 0.0 |
| Stroke | 0.0 |
| Health Risk Behaviors | — |
| Binge Drinking | 0.0 |
| Current Smoker | 0.0 |
| No Leisure Time for Physical Activity | 0.0 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |

| | |
|---|---|
| Children | 0.0 |
| Elderly | 0.0 |
| English Speaking | 0.0 |
| Foreign-born | 0.0 |
| Outdoor Workers | 0.0 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 0.0 |
| Traffic Density | 0.0 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 0.0 |
| Other Decision Support | — |
| 2016 Voting | 0.0 |

## 7.3. Overall Health & Equity Scores

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

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

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

### 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

## 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Schedule based information provided on existing tenant leases ending in 2024/2025. |
| Operations: Vehicle Data | Trip characteristics based on information provided in the Trip Generation. |
| Operations: Fleet Mix | Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks |
| Operations: Architectural Coatings | SCAQMD Rule 1113 |
| Operations: Refrigerants | Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater. |
| Operations: Energy Use | Project will not utilize natural gas |

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# APPENDIX 4.3:

# EMFAC 2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2024
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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Los Angeles (SC) | 2024 | HHDT | Aggregate | Aggregate | Gasoline | 43.66381395 | 2950.780026 | 0.728709358 | 728.7093583 | 1157130.862 | 2950.780026 | 6988727.018 | 6.04 | HHDT |
| Los Angeles (SC) | 2024 | HHDT | Aggregate | Aggregate | Diesel | 52323.86623 | 6605322.598 | 1094.182277 | 1094182.277 | | 6605322.598 | | | |
| Los Angeles (SC) | 2024 | HHDT | Aggregate | Aggregate | Electricity | 159.3276671 | 16508.79771 | 0 | 0 | | 16508.79771 | | | |
| Los Angeles (SC) | 2024 | HHDT | Aggregate | Aggregate | Natural Gas | 5707.00382 | 363944.8425 | 62.21987558 | 62219.87558 | | 363944.8425 | | | |
| Los Angeles (SC) | 2024 | LDA | Aggregate | Aggregate | Gasoline | 3312060.357 | 130838318.3 | 4512.231245 | 4512231.245 | 4595495.72 | 130838318.3 | 143571148.1 | 31.24 | LDA |
| Los Angeles (SC) | 2024 | LDA | Aggregate | Aggregate | Diesel | 8789.19002 | 256968.192 | 6.410626351 | 6410.626351 | | 256968.192 | | | |
| Los Angeles (SC) | 2024 | LDA | Aggregate | Aggregate | Electricity | 171677.6521 | 8196290.291 | 0 | 0 | | 8196290.291 | | | |
| Los Angeles (SC) | 2024 | LDA | Aggregate | Aggregate | Plug-in Hybric | 91933.06913 | 4279571.308 | 76.85384871 | 76853.84871 | | 4279571.308 | | | |
| Los Angeles (SC) | 2024 | LDT1 | Aggregate | Aggregate | Gasoline | 311828.9204 | 11357946.66 | 469.1348945 | 469134.8945 | 469632.8943 | 11357946.66 | 11419457.89 | 24.32 | LDT1 |
| Los Angeles (SC) | 2024 | LDT1 | Aggregate | Aggregate | Diesel | 118.5293676 | 2368.568506 | 0.102906474 | 102.9064741 | | 2368.568506 | | | |
| Los Angeles (SC) | 2024 | LDT1 | Aggregate | Aggregate | Electricity | 868.5158405 | 34958.66479 | 0 | 0 | | 34958.66479 | | | |
| Los Angeles (SC) | 2024 | LDT1 | Aggregate | Aggregate | Plug-in Hybric | 472.0350753 | 24183.9963 | 0.39509337 | 395.0933696 | | 24183.9963 | | | |
| Los Angeles (SC) | 2024 | LDT2 | Aggregate | Aggregate | Gasoline | 1566130.15 | 64695889.13 | 2725.55071 | 2725550.71 | 2743945.965 | 64695889.13 | 65972702.04 | 24.04 | LDT2 |
| Los Angeles (SC) | 2024 | LDT2 | Aggregate | Aggregate | Diesel | 4948.489318 | 214828.9903 | 6.830852294 | 6830.852294 | | 214828.9903 | | | |
| Los Angeles (SC) | 2024 | LDT2 | Aggregate | Aggregate | Electricity | 10499.25109 | 385269.4446 | 0 | 0 | | 385269.4446 | | | |
| Los Angeles (SC) | 2024 | LDT2 | Aggregate | Aggregate | Plug-in Hybric | 13716.62465 | 676714.4758 | 11.56440192 | 11564.40192 | | 676714.4758 | | | |
| Los Angeles (SC) | 2024 | LHDT1 | Aggregate | Aggregate | Gasoline | 123836.5988 | 4934814.469 | 365.1227387 | 365122.7387 | 485959.102 | 4934814.469 | 7442807.712 | 15.32 | LHDT1 |
| Los Angeles (SC) | 2024 | LHDT1 | Aggregate | Aggregate | Diesel | 55652.48261 | 2469363.403 | 120.8363633 | 120836.3633 | | 2469363.403 | | | |
| Los Angeles (SC) | 2024 | LHDT1 | Aggregate | Aggregate | Electricity | 510.884395 | 38629.84069 | 0 | 0 | | 38629.84069 | | | |
| Los Angeles (SC) | 2024 | LHDT2 | Aggregate | Aggregate | Gasoline | 18962.98073 | 709989.1461 | 60.2102533 | 60210.2533 | 123660.7251 | 709989.1461 | 1812758.289 | 14.66 | LHDT2 |
| Los Angeles (SC) | 2024 | LHDT2 | Aggregate | Aggregate | Diesel | 25083.1257 | 1093295.739 | 63.45047175 | 63450.47175 | | 1093295.739 | | | |
| Los Angeles (SC) | 2024 | LHDT2 | Aggregate | Aggregate | Electricity | 132.2328573 | 9473.403689 | 0 | 0 | | 9473.403689 | | | |
| Los Angeles (SC) | 2024 | MCY | Aggregate | Aggregate | Gasoline | 146992.0035 | 969260.7434 | 23.52047988 | 23520.47988 | 23520.47988 | 969260.7434 | 969260.7434 | 41.21 | MCY |
| Los Angeles (SC) | 2024 | MDV | Aggregate | Aggregate | Gasoline | 941104.6897 | 35897503.31 | 1857.587206 | 1857587.206 | 1881896.927 | 35897503.31 | 37098730.05 | 19.71 | MDV |
| Los Angeles (SC) | 2024 | MDV | Aggregate | Aggregate | Diesel | 10836.3418 | 423746.7965 | 18.00577922 | 18005.77922 | | 423746.7965 | | | |
| Los Angeles (SC) | 2024 | MDV | Aggregate | Aggregate | Electricity | 11444.7591 | 420107.4512 | 0 | 0 | | 420107.4512 | | | |
| Los Angeles (SC) | 2024 | MDV | Aggregate | Aggregate | Plug-in Hybric | 7947.75957 | 357372.4851 | 6.303941889 | 6303.941889 | | 357372.4851 | | | |
| Los Angeles (SC) | 2024 | MH | Aggregate | Aggregate | Gasoline | 15037.72111 | 149209.683 | 30.84240042 | 30842.40042 | 36511.49942 | 149209.683 | 205681.0599 | 5.63 | MH |
| Los Angeles (SC) | 2024 | MH | Aggregate | Aggregate | Diesel | 5352.033135 | 56471.37694 | 5.669099008 | 5669.099008 | | 56471.37694 | | | |
| Los Angeles (SC) | 2024 | MHDT | Aggregate | Aggregate | Gasoline | 14716.96009 | 800329.4685 | 155.2858895 | 155285.8895 | 442188.5098 | 800329.4685 | 3360494.609 | 7.60 | MHDT |
| Los Angeles (SC) | 2024 | MHDT | Aggregate | Aggregate | Diesel | 59315.44342 | 2506987.886 | 281.725312 | 281725.312 | | 2506987.886 | | | |
| Los Angeles (SC) | 2024 | MHDT | Aggregate | Aggregate | Electricity | 193.0645447 | 11118.76621 | 0 | 0 | | 11118.76621 | | | |
| Los Angeles (SC) | 2024 | MHDT | Aggregate | Aggregate | Natural Gas | 877.2928396 | 42058.48817 | 5.177308374 | 5177.308374 | | 42058.48817 | | | |
| Los Angeles (SC) | 2024 | OBUS | Aggregate | Aggregate | Gasoline | 3692.490323 | 145452.6476 | 28.9039628 | 28903.9628 | 55393.72274 | 145452.6476 | 332652.1346 | 6.01 | OBUS |
| Los Angeles (SC) | 2024 | OBUS | Aggregate | Aggregate | Diesel | 2097.35841 | 166829.4354 | 24.19368289 | 24193.68289 | | 166829.4354 | | | |
| Los Angeles (SC) | 2024 | OBUS | Aggregate | Aggregate | Electricity | 7.843994974 | 589.8873145 | 0 | 0 | | 589.8873145 | | | |
| Los Angeles (SC) | 2024 | OBUS | Aggregate | Aggregate | Natural Gas | 328.2793362 | 19780.16427 | 2.296077049 | 2296.077049 | | 19780.16427 | | | |
| Los Angeles (SC) | 2024 | SBUS | Aggregate | Aggregate | Gasoline | 1372.011029 | 60689.4237 | 6.779512867 | 6779.512867 | 20034.60256 | 60689.4237 | 130247.1868 | 6.50 | SBUS |
| Los Angeles (SC) | 2024 | SBUS | Aggregate | Aggregate | Diesel | 1597.022329 | 32040.99119 | 4.380138125 | 4380.138125 | | 32040.99119 | | | |
| Los Angeles (SC) | 2024 | SBUS | Aggregate | Aggregate | Electricity | 11.68207238 | 360.2140355 | 0 | 0 | | 360.2140355 | | | |
| Los Angeles (SC) | 2024 | SBUS | Aggregate | Aggregate | Natural Gas | 1503.388379 | 37156.55788 | 8.874951572 | 8874.951572 | | 37156.55788 | | | |
| Los Angeles (SC) | 2024 | UBUS | Aggregate | Aggregate | Gasoline | 437.5652487 | 30984.43511 | 6.753553835 | 6753.553835 | 141592.4336 | 30984.43511 | 453376.8676 | 3.20 | UBUS |
| Los Angeles (SC) | 2024 | UBUS | Aggregate | Aggregate | Diesel | 9.459880331 | 1241.732151 | 0.213406841 | 213.4068407 | | 1241.732151 | | | |
| Los Angeles (SC) | 2024 | UBUS | Aggregate | Aggregate | Electricity | 97.83776932 | 8157.187193 | 0 | 0 | | 8157.187193 | | | |
| Los Angeles (SC) | 2024 | UBUS | Aggregate | Aggregate | Natural Gas | 3846.599176 | 412993.5131 | 134.6254729 | 134625.4729 | | 412993.5131 | | | |

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (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 | endar | hicle Catego | Model Year | Speed | Fuel | Population | Total VMT | Fuel_Consumption | Fuel_Consumption | Total Fuel | VMT | Total VMT | Miles per Gallon | Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Los Angeles (SC) | 2027 | HHDT | Aggregate | Aggregate | Gasoline | 28.46043311 | 2392.872562 | 0.550702282 | 550.7022818 | 1164600.43 | 2392.872562 | 7425699.004 | 6.38 | HHDT |
| Los Angeles (SC) | 2027 | HHDT | Aggregate | Aggregate | Diesel | 56384.30241 | 6917995.933 | 1098.556913 | 1098556.913 | | 6917995.933 | | | |
| Los Angeles (SC) | 2027 | HHDT | Aggregate | Aggregate | Electricity | 980.6476537 | 107461.5922 | 0 | 0 | | 107461.5922 | | | |
| Los Angeles (SC) | 2027 | HHDT | Aggregate | Aggregate | Natural Gas | 6429.376629 | 397848.6065 | 65.49281424 | 65492.81424 | | 397848.6065 | | | |
| Los Angeles (SC) | 2027 | LDA | Aggregate | Aggregate | Gasoline | 3179092.826 | 123505266.4 | 4009.438092 | 4009438.092 | 4095082.03 | 123505266.4 | 139100776.7 | 33.97 | LDA |
| Los Angeles (SC) | 2027 | LDA | Aggregate | Aggregate | Diesel | 6534.724386 | 191083.9151 | 4.56398353 | 4563.98353 | | 191083.9151 | | | |
| Los Angeles (SC) | 2027 | LDA | Aggregate | Aggregate | Electricity | 226006.5991 | 10613840.63 | 0 | 0 | | 10613840.63 | | | |
| Los Angeles (SC) | 2027 | LDA | Aggregate | Aggregate | Plug-in Hybric | 107928.2631 | 4790585.814 | 81.07995446 | 81079.95446 | | 4790585.814 | | | |
| Los Angeles (SC) | 2027 | LDT1 | Aggregate | Aggregate | Gasoline | 299305.2204 | 10834971.77 | 422.9642527 | 422964.2527 | 423856.1927 | 10834971.77 | 10961385.3 | 25.86 | LDT1 |
| Los Angeles (SC) | 2027 | LDT1 | Aggregate | Aggregate | Diesel | 45.23949508 | 892.2827514 | 0.037128442 | 37.12844208 | | 892.2827514 | | | |
| Los Angeles (SC) | 2027 | LDT1 | Aggregate | Aggregate | Electricity | 1533.530787 | 70048.26106 | 0 | 0 | | 70048.26106 | | | |
| Los Angeles (SC) | 2027 | LDT1 | Aggregate | Aggregate | Plug-in Hybric | 1135.428964 | 55472.98057 | 0.854811555 | 854.8115555 | | 55472.98057 | | | |
| Los Angeles (SC) | 2027 | LDT2 | Aggregate | Aggregate | Gasoline | 1666211.776 | 67880593.69 | 2659.957346 | 2659957.346 | 2683058.295 | 67880593.69 | 69838287.02 | 26.03 | LDT2 |
| Los Angeles (SC) | 2027 | LDT2 | Aggregate | Aggregate | Diesel | 5647.118826 | 237466.0947 | 7.099804527 | 7099.804527 | | 237466.0947 | | | |
| Los Angeles (SC) | 2027 | LDT2 | Aggregate | Aggregate | Electricity | 20892.07314 | 727697.1044 | 0 | 0 | | 727697.1044 | | | |
| Los Angeles (SC) | 2027 | LDT2 | Aggregate | Aggregate | Plug-in Hybric | 21318.0193 | 992530.1388 | 16.00114517 | 16001.14517 | | 992530.1388 | | | |
| Los Angeles (SC) | 2027 | LHDT1 | Aggregate | Aggregate | Gasoline | 123790.2824 | 4944074.819 | 343.253308 | 343253.308 | 477458.955 | 4944074.819 | 8024960.505 | 16.81 | LHDT1 |
| Los Angeles (SC) | 2027 | LHDT1 | Aggregate | Aggregate | Diesel | 64077.47622 | 2787685.885 | 134.205647 | 134205.647 | | 2787685.885 | | | |
| Los Angeles (SC) | 2027 | LHDT1 | Aggregate | Aggregate | Electricity | 4540.547639 | 293199.8015 | 0 | 0 | | 293199.8015 | | | |
| Los Angeles (SC) | 2027 | LHDT2 | Aggregate | Aggregate | Gasoline | 18663.23138 | 695273.9383 | 55.5644299 | 55564.4299 | 126634.9134 | 695273.9383 | 2020334.934 | 15.95 | LHDT2 |
| Los Angeles (SC) | 2027 | LHDT2 | Aggregate | Aggregate | Diesel | 29570.22458 | 1252646.951 | 71.07048352 | 71070.48352 | | 1252646.951 | | | |
| Los Angeles (SC) | 2027 | LHDT2 | Aggregate | Aggregate | Electricity | 1178.754467 | 72414.04476 | 0 | 0 | | 72414.04476 | | | |
| Los Angeles (SC) | 2027 | MCY | Aggregate | Aggregate | Gasoline | 157033.573 | 1019766.116 | 24.52211084 | 24522.11084 | 24522.11084 | 1019766.116 | 1019766.116 | 41.59 | MCY |
| Los Angeles (SC) | 2027 | MDV | Aggregate | Aggregate | Gasoline | 976608.911 | 37034848.01 | 1781.876783 | 1781876.783 | 1808380.115 | 37034848.01 | 38799546.51 | 21.46 | MDV |
| Los Angeles (SC) | 2027 | MDV | Aggregate | Aggregate | Diesel | 11332.66965 | 430680.9504 | 17.26010389 | 17260.10389 | | 430680.9504 | | | |
| Los Angeles (SC) | 2027 | MDV | Aggregate | Aggregate | Electricity | 22186.78667 | 771017.0637 | 0 | 0 | | 771017.0637 | | | |
| Los Angeles (SC) | 2027 | MDV | Aggregate | Aggregate | Plug-in Hybric | 13026.49459 | 563000.4861 | 9.243228581 | 9243.228581 | | 563000.4861 | | | |
| Los Angeles (SC) | 2027 | MH | Aggregate | Aggregate | Gasoline | 14005.69734 | 144781.4642 | 29.92997464 | 29929.97464 | 36143.18767 | 144781.4642 | 206641.5616 | 5.72 | MH |
| Los Angeles (SC) | 2027 | MH | Aggregate | Aggregate | Diesel | 5836.820009 | 61860.09744 | 6.213213033 | 6213.213033 | | 61860.09744 | | | |
| Los Angeles (SC) | 2027 | MHDT | Aggregate | Aggregate | Gasoline | 13674.91053 | 739072.9664 | 138.9224355 | 138922.4355 | 426562.581 | 739072.9664 | 3420666.835 | 8.02 | MHDT |
| Los Angeles (SC) | 2027 | MHDT | Aggregate | Aggregate | Diesel | 62151.43046 | 2541697.739 | 281.9342075 | 281934.2075 | | 2541697.739 | | | |
| Los Angeles (SC) | 2027 | MHDT | Aggregate | Aggregate | Electricity | 1706.137105 | 93290.7971 | 0 | 0 | | 93290.7971 | | | |
| Los Angeles (SC) | 2027 | MHDT | Aggregate | Aggregate | Natural Gas | 1030.856303 | 46605.33254 | 5.705938052 | 5705.938052 | | 46605.33254 | | | |
| Los Angeles (SC) | 2027 | OBUS | Aggregate | Aggregate | Gasoline | 3356.977295 | 123908.583 | 23.90263812 | 23902.63812 | 49854.25296 | 123908.583 | 316117.7337 | 6.34 | OBUS |
| Los Angeles (SC) | 2027 | OBUS | Aggregate | Aggregate | Diesel | 2251.051352 | 167338.1278 | 23.57468951 | 23574.68951 | | 167338.1278 | | | |
| Los Angeles (SC) | 2027 | OBUS | Aggregate | Aggregate | Electricity | 51.09363126 | 3625.308364 | 0 | 0 | | 3625.308364 | | | |
| Los Angeles (SC) | 2027 | OBUS | Aggregate | Aggregate | Natural Gas | 371.9283173 | 21245.71448 | 2.376925334 | 2376.925334 | | 21245.71448 | | | |
| Los Angeles (SC) | 2027 | SBUS | Aggregate | Aggregate | Gasoline | 1466.79361 | 64088.6419 | 7.059930766 | 7059.930766 | 20288.45825 | 64088.6419 | 134531.9473 | 6.63 | SBUS |
| Los Angeles (SC) | 2027 | SBUS | Aggregate | Aggregate | Diesel | 1416.231608 | 28030.62768 | 3.79611078 | 3796.11078 | | 28030.62768 | | | |
| Los Angeles (SC) | 2027 | SBUS | Aggregate | Aggregate | Electricity | 71.55685635 | 2257.450349 | 0 | 0 | | 2257.450349 | | | |
| Los Angeles (SC) | 2027 | SBUS | Aggregate | Aggregate | Natural Gas | 1676.629213 | 40155.22736 | 9.432416707 | 9432.416707 | | 40155.22736 | | | |
| Los Angeles (SC) | 2027 | UBUS | Aggregate | Aggregate | Gasoline | 433.2360292 | 30482.51385 | 6.572380998 | 6572.380998 | 134064.8238 | 30482.51385 | 456123.3104 | 3.40 | UBUS |
| Los Angeles (SC) | 2027 | UBUS | Aggregate | Aggregate | Diesel | 6.273852036 | 933.3184865 | 0.160747972 | 160.747972 | | 933.3184865 | | | |
| Los Angeles (SC) | 2027 | UBUS | Aggregate | Aggregate | Electricity | 294.3792467 | 28836.71203 | 0 | 0 | | 28836.71203 | | | |
| Los Angeles (SC) | 2027 | UBUS | Aggregate | Aggregate | Natural Gas | 3684.164474 | 395870.766 | 127.3316948 | 127331.6948 | | 395870.766 | | | |

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Los Angeles (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 | \hicle Catego | Model Year | Speed | Fuel | Population | Total VMT | Fuel_Consumption | Fuel_Consumption | Total Fuel | VMT | Total VMT | Miles per Gallon | Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Los Angeles (SC) | 2028 | HHDT | Aggregate | Aggregate | Gasoline | 25.44926558 | 2268.374659 | 0.51084264 | 510.8426405 | 1161993.453 | 2268.374659 | 7577807.084 | 6.52 | HHDT |
| Los Angeles (SC) | 2028 | HHDT | Aggregate | Aggregate | Diesel | 57257.80612 | 7006667.238 | 1095.262107 | 1095262.107 | | 7006667.238 | | | |
| Los Angeles (SC) | 2028 | HHDT | Aggregate | Aggregate | Electricity | 1491.868023 | 163138.8979 | 0 | 0 | | 163138.8979 | | | |
| Los Angeles (SC) | 2028 | HHDT | Aggregate | Aggregate | Natural Gas | 6600.854666 | 405732.574 | 66.22050345 | 66220.50345 | | 405732.574 | | | |
| Los Angeles (SC) | 2028 | LDA | Aggregate | Aggregate | Gasoline | 3140409.083 | 121531275.9 | 3875.571643 | 3875571.643 | 3961326.527 | 121531275.9 | 137794771.6 | 34.79 | LDA |
| Los Angeles (SC) | 2028 | LDA | Aggregate | Aggregate | Diesel | 5730.385828 | 171445.5754 | 4.015544239 | 4015.544239 | | 171445.5754 | | | |
| Los Angeles (SC) | 2028 | LDA | Aggregate | Aggregate | Electricity | 242133.5654 | 11195915.06 | 0 | 0 | | 11195915.06 | | | |
| Los Angeles (SC) | 2028 | LDA | Aggregate | Aggregate | Plug-in Hybric | 112008.9029 | 4896135.1 | 81.73933994 | 81739.33994 | | 4896135.1 | | | |
| Los Angeles (SC) | 2028 | LDT1 | Aggregate | Aggregate | Gasoline | 295789.8982 | 10688845.77 | 410.092255 | 410092.255 | 411153.6227 | 10688845.77 | 10842908.93 | 26.37 | LDT1 |
| Los Angeles (SC) | 2028 | LDT1 | Aggregate | Aggregate | Diesel | 28.25879369 | 568.5264623 | 0.022852413 | 22.85241305 | | 568.5264623 | | | |
| Los Angeles (SC) | 2028 | LDT1 | Aggregate | Aggregate | Electricity | 1850.793917 | 85592.56471 | 0 | 0 | | 85592.56471 | | | |
| Los Angeles (SC) | 2028 | LDT1 | Aggregate | Aggregate | Plug-in Hybric | 1409.691443 | 67902.06675 | 1.038515283 | 1038.515283 | | 67902.06675 | | | |
| Los Angeles (SC) | 2028 | LDT2 | Aggregate | Aggregate | Gasoline | 1698089.402 | 68789491.93 | 2643.97758 | 2643977.58 | 2668601.915 | 68789491.93 | 70976935.18 | 26.60 | LDT2 |
| Los Angeles (SC) | 2028 | LDT2 | Aggregate | Aggregate | Diesel | 5838.43534 | 243275.111 | 7.151570294 | 7151.570294 | | 243275.111 | | | |
| Los Angeles (SC) | 2028 | LDT2 | Aggregate | Aggregate | Electricity | 24770.0671 | 848796.585 | 0 | 0 | | 848796.585 | | | |
| Los Angeles (SC) | 2028 | LDT2 | Aggregate | Aggregate | Plug-in Hybric | 23929.64409 | 1095371.549 | 17.47276463 | 17472.76463 | | 1095371.549 | | | |
| Los Angeles (SC) | 2028 | LHDT1 | Aggregate | Aggregate | Gasoline | 123514.8081 | 4906577.088 | 335.3460481 | 335346.0481 | 471936.4065 | 4906577.088 | 8198046.424 | 17.37 | LHDT1 |
| Los Angeles (SC) | 2028 | LHDT1 | Aggregate | Aggregate | Diesel | 66273.45759 | 2847269.923 | 136.5903584 | 136590.3584 | | 2847269.923 | | | |
| Los Angeles (SC) | 2028 | LHDT1 | Aggregate | Aggregate | Electricity | 7078.582149 | 444199.4134 | 0 | 0 | | 444199.4134 | | | |
| Los Angeles (SC) | 2028 | LHDT2 | Aggregate | Aggregate | Gasoline | 18493.46928 | 685455.8299 | 53.92810432 | 53928.10432 | 126451.5894 | 685455.8299 | 2080219.364 | 16.45 | LHDT2 |
| Los Angeles (SC) | 2028 | LHDT2 | Aggregate | Aggregate | Diesel | 30779.95102 | 1284692.724 | 72.5234851 | 72523.4851 | | 1284692.724 | | | |
| Los Angeles (SC) | 2028 | LHDT2 | Aggregate | Aggregate | Electricity | 1843.198599 | 110070.8101 | 0 | 0 | | 110070.8101 | | | |
| Los Angeles (SC) | 2028 | MCY | Aggregate | Aggregate | Gasoline | 160132.4304 | 1032520.196 | 24.77976253 | 24779.76253 | 24779.76253 | 1032520.196 | 1032520.196 | 41.67 | MCY |
| Los Angeles (SC) | 2028 | MDV | Aggregate | Aggregate | Gasoline | 988545.5796 | 37378798.2 | 1762.204626 | 1762204.626 | 1789317.682 | 37378798.2 | 39316976.55 | 21.97 | MDV |
| Los Angeles (SC) | 2028 | MDV | Aggregate | Aggregate | Diesel | 11427.46283 | 431397.9419 | 16.98064648 | 16980.64648 | | 431397.9419 | | | |
| Los Angeles (SC) | 2028 | MDV | Aggregate | Aggregate | Electricity | 25829.54462 | 881887.1927 | 0 | 0 | | 881887.1927 | | | |
| Los Angeles (SC) | 2028 | MDV | Aggregate | Aggregate | Plug-in Hybric | 14652.2037 | 624893.2135 | 10.13240981 | 10132.40981 | | 624893.2135 | | | |
| Los Angeles (SC) | 2028 | MH | Aggregate | Aggregate | Gasoline | 13737.8769 | 143564.1869 | 29.67250668 | 29672.50668 | 36033.61617 | 143564.1869 | 206872.5561 | 5.74 | MH |
| Los Angeles (SC) | 2028 | MH | Aggregate | Aggregate | Diesel | 5981.722201 | 63308.36922 | 6.36110949 | 6361.10949 | | 63308.36922 | | | |
| Los Angeles (SC) | 2028 | MHDT | Aggregate | Aggregate | Gasoline | 13309.14864 | 715457.69 | 133.1693014 | 133169.3014 | 418588.2788 | 715457.69 | 3444768.831 | 8.23 | MHDT |
| Los Angeles (SC) | 2028 | MHDT | Aggregate | Aggregate | Diesel | 62608.21554 | 2532865.166 | 279.6077417 | 279607.7417 | | 2532865.166 | | | |
| Los Angeles (SC) | 2028 | MHDT | Aggregate | Aggregate | Electricity | 2743.218394 | 148973.8917 | 0 | 0 | | 148973.8917 | | | |
| Los Angeles (SC) | 2028 | MHDT | Aggregate | Aggregate | Natural Gas | 1070.013059 | 47472.08291 | 5.81123562 | 5811.23562 | | 47472.08291 | | | |
| Los Angeles (SC) | 2028 | OBUS | Aggregate | Aggregate | Gasoline | 3248.288828 | 117255.0327 | 22.41881877 | 22418.81877 | 48178.26208 | 117255.0327 | 312021.511 | 6.48 | OBUS |
| Los Angeles (SC) | 2028 | OBUS | Aggregate | Aggregate | Diesel | 2290.725844 | 167642.9272 | 23.37570702 | 23375.70702 | | 167642.9272 | | | |
| Los Angeles (SC) | 2028 | OBUS | Aggregate | Aggregate | Electricity | 79.61401844 | 5584.825541 | 0 | 0 | | 5584.825541 | | | |
| Los Angeles (SC) | 2028 | OBUS | Aggregate | Aggregate | Natural Gas | 383.0211137 | 21538.72555 | 2.383736287 | 2383.736287 | | 21538.72555 | | | |
| Los Angeles (SC) | 2028 | SBUS | Aggregate | Aggregate | Gasoline | 1490.849724 | 64884.29173 | 7.120377974 | 7120.377974 | 20273.50936 | 64884.29173 | 135931.9099 | 6.70 | SBUS |
| Los Angeles (SC) | 2028 | SBUS | Aggregate | Aggregate | Diesel | 1341.562637 | 26534.03988 | 3.578854946 | 3578.854946 | | 26534.03988 | | | |
| Los Angeles (SC) | 2028 | SBUS | Aggregate | Aggregate | Electricity | 113.0451849 | 3573.929977 | 0 | 0 | | 3573.929977 | | | |
| Los Angeles (SC) | 2028 | SBUS | Aggregate | Aggregate | Natural Gas | 1728.664065 | 40939.64835 | 9.574276435 | 9574.276435 | | 40939.64835 | | | |
| Los Angeles (SC) | 2028 | UBUS | Aggregate | Aggregate | Gasoline | 431.6536764 | 30444.26876 | 6.551518372 | 6551.518372 | 127511.786 | 30444.26876 | 457038.4205 | 3.58 | UBUS |
| Los Angeles (SC) | 2028 | UBUS | Aggregate | Aggregate | Diesel | 0.21774371 | 22.86192822 | 0.00287857 | 2.878570418 | | 22.86192822 | | | |
| Los Angeles (SC) | 2028 | UBUS | Aggregate | Aggregate | Electricity | 441.1335681 | 47325.46386 | 0 | 0 | | 47325.46386 | | | |
| Los Angeles (SC) | 2028 | UBUS | Aggregate | Aggregate | Natural Gas | 3553.912457 | 379245.8259 | 120.9573891 | 120957.3891 | | 379245.8259 | | | |

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