RECON

*An Employee-Owned Company*

June 24, 2024

Mr. Brian Sorensen
InSite Property Group LLC
19191 S. Vermont Avenue, Suite 680
Torrance, CA 90502

Reference: Air Quality and Greenhouse Gas Analysis for the Quarry Road Self-Storage and RV Parking Facility Project (Project Number PDS2021-MUP-21-009; RECON Number 9891)

Dear Mr. Sorensen:

This letter describes the potential air quality and greenhouse gas (GHG) impacts resulting from construction and operation of the Quarry Road Self-Storage and RV Parking Facility Project (project). This analysis was prepared in accordance with the County of San Diego (County) Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality (County Air Quality Guidelines, County of San Diego 2007)) and Bay Area Air Quality Management District (BAAQMD) GHG guidance (BAAQMD 2022).

- Project Common Name: Quarry Road Self-Storage and RV Parking Facility Project
- Project Number: PDS2021-MUP-21-009
- Date: June 24, 2024
- County-approved Preparer: Jessica Fleming
  RECON Environmental, Inc.
  3111 Camino del Rio North, Suite 600
  San Diego, CA 92108
- Project Proponent: Mr. Brian Sorensen
  InSite Property Group LLC
  19191 S. Vermont Avenue, Suite 680
  Torrance, CA 90502
- Prepared for the County of San Diego (County)

## 1.0 Project Description

The project site consists of three parcels in the unincorporated community of Bonita-Sunnyside in San Diego County. It is situated just east of Quarry Road at the intersection with Sweetwater Road, approximately 0.33 mile south of the State Route (SR) 125/SR-54 interchange. Figure 1 shows the regional location of the project. Figure 2 shows an aerial photograph of the project site and vicinity.


Project Location

RECON

\\serverfs01.recon-us.com\gis\JOBS5\9891\common_gis\fig1.mxd 8/11/2021 fmm

FIGURE 1
Regional Location

Image Source: NearMap (flown April 2021)


RECON

M:\JOBS5\9891\common_gis\fig2_air.mxd 08/23/2021 bma

FIGURE 2
Project Location on Aerial Photograph

The project is a Major Use Permit (MUP) to develop a mini self-storage facility on an approximately 10.74-acre parcel. The proposed MUP boundary would be limited to 4.99 acres pursuant to Zoning Ordinance Section 2185.c. While the MUP boundary is 4.99 acres, the project includes a fuel management zone, limited building zone, trail, pathway and frontage improvements that bring the total area of disturbance to 9.03 acres both within the 10.74-acre parcel and within off-site areas (such as grading for the realignment of Quarry Road). The project proposes to develop a 1,023-unit, 132,425-square-foot storage facility and a 1,000-square-foot leasing office and will include 109 recreational vehicle (RV) parking spaces and 21 standard passenger vehicle parking spaces for customers and employees. There will be 5 loading spaces provided by the entrances to the storage building. Additionally, the project proposes to develop and enhance the trails system at the boundary of the development for public benefit. The project includes the dedication of a biological open space easement over 1.97 acres located in the northern portion of the project site, which would be separated from the MUP boundary by lodgepole fencing and include open space signage. The project will improve Quarry Road along the project's entire frontage from a 20-foot improved width to varying 26 feet to 32 feet wide plus a 10-foot-wide pathway parallel to Quarry Road. The site would operate from 8 a.m. to 8 p.m., seven days per week, 361 days a year. The site is currently vacant and undeveloped. Fire service is provided by the Bonita-Sunnyside Fire Protection District. Water service is provided by Sweetwater Authority. Sewer service is provided by San Diego County Sanitation District. School service is not required as the project does not propose residential uses. The project proposes approximately 8.3 acres of grading and will require approximately 30,275 cubic yards of cut and 22,535 cubic yards yard of fill. Approximately 7,740 cubic yards of material will be exported. The site is subject to the General Plan Regional Category Village and General Plan Land Use Designation Village Residential 2 (VR-2). Zoning for the site is Rural Residential (RR). The project is located directly to the east of Sweetwater Road and is directly to the south of State Routes 54 and 125 in the Sweetwater Community Planning Area within unincorporated San Diego County (Assessor Parcel Numbers 586-050-36, -44, and -48). Figure 3 shows the proposed site plan.

## 2.0 Environmental Setting

### 2.1 Air Quality

#### 2.1.1 Existing Setting

The project is located in San Diego County, within the San Diego Air Basin (SDAB) and approximately eight miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas. Sensitive receptors near the project site include residential uses to the south and west.

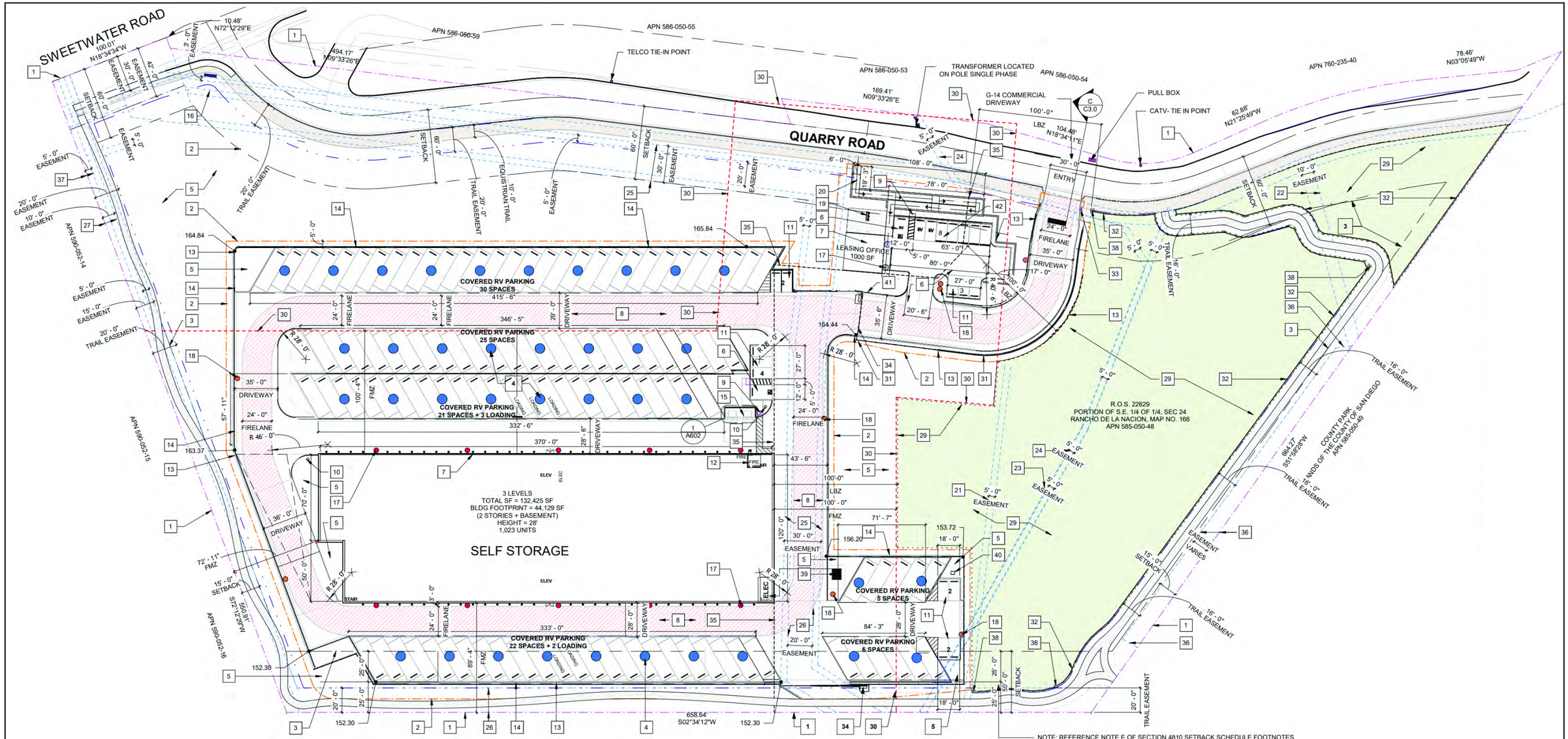
Air quality at a given location is a function of the types and quantities of pollutants being emitted into the air locally and throughout the basin, and the dispersal rates of pollutants within the region. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

#### 2.1.2 Climate and Meteorology

The project site, like the rest of San Diego County, has a Mediterranean climate characterized by warm, dry summers and mild winters. The annual high and low temperatures for the project site are 76 and 54 degrees Fahrenheit (°F), respectively. The average annual precipitation is 14 inches, falling primarily from November to April (U.S. Climate Data 2021).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Map Source: roZEN




1. PROPERTY LINE.
2. MUP BOUNDARY.
3. SETBACK LINE.
4. LIGHT FIXTURE, SEE LEGEND AND LIGHTING PLAN.
5. LANDSCAPE AREA, SEE LANDSCAPE SHEETS.
6. PROPOSED ACCESSIBLE PARKING.
7. BUILDING FOOTPRINT.
8. 24' FIRE ACCESS DRIVE AISLE.
9. TRUNCATED DOMES, SEE CIVIL.
10. PROPOSED FIRE HYDRANT, SEE UTILITIES.
11. PROPOSED STANDARD PARKING TO MEET MIN. REQUIREMENT OF 9'x18' STALL.
12. FIRE RISER.
13. RETAINING WALL , SEE SHEET A11 & A401
14. 6'-0" WROUGHT IRON FENCING, SEE SHEET A111.
15. TRASH ENCLOSURE, SEE SHEET A602.
16. MONUMENT SIGN, SEE SIGNAGE ON SHEET A903.
17. EXTERIOR WALL PACK LIGHT FIXTURES, SEE LEGEND AND LIGHTING PLAN
18. EXTERIOR POLE LIGHTING, SEE LEGEND AND LIGHTING PLAN
19. BICYCLE RACK FOR 3 BICYLES.
20. ADA RAMP FROM QUARRY ROAD, SEE CIVIL FOR FINAL SLOPES.
21. SPRING VALLEY SANTIATION DISTRICT SEWER EASEMENT.
22. 10' WATER PIPE LINE EASEMENT
23. 5' WATER PIPE LINE EASEMENT.
24. 5' WATER PIPE LINE EASEMENT.
25. 30' SOUTH BAY IRRIGATION WATER MAIN EASEMENT.
26. 20' SPRING VALLEY SANITATION DISTRICT ACCESS EASEMENT.
27. 10' CALIFORNIA WATER AND TELEPHONE COMPANY SEWER MAIN EASEMENT.
28. 42' PUBLIC HIGHWAY EASEMENT.
29. BIOLOGICAL OPEN SPACE EASEMENT
30. 100' FUEL MANAGEMENT ZONE (FMZ)
31. 6' WOOD FENCING, SEE SHEET A111.
32. 4' LODGE POLE FENCING AT BIOLOGICAL OPEN SPACE EASEMENT.
33. WAYFINDING SIGN, SEE SIGNAGE ON SHEET A903.
34. LIFT GATE, SEE SHEET A111 FOR DETAILS.
35. LIMITED BUILDING ZONE (LBZ).
36. SAN DIEGO COUNTY GAS AND ELECTRIC COMPANY PUBLIC UTILITES EASEMENT.
37. 5' WIDE EASEMENT FOR WATER PIPE LINE PURPOSES PER SURVEY (NOTE15)
38. BIOLOGICAL OPEN SPACE EASEMENT SIGN. (SEE NOTES)
39. ELECTRICAL TRASNFORMER.
40. SOLAR BATTERY.
41. KEY BOX FOR SWEETWATER AUTHORITY AND SANITATION.
42. EV CAPABLE STANDARD PARKING, TO MEET MIN. REQUIREMENT OF 9'x18' STALL.

RECON

M:\JOBS5\9891\nos\graphics\fig3_nos.afdesign 06/19/24 fmm

FIGURE 3
Site Plan

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone creates a temperature inversion layer (a layer in the atmosphere in which temperature increases with height) that acts as a lid to the vertical dispersion of air pollutants in the SDAB. Beneath the inversion layer pollutants become "trapped" as their ability to disperse diminishes. Sunlight reacts with air pollutants (reactive organic gas [ROG] and oxides of nitrogen [$NO_X$]) to create ozone ($O_3$). Thus, poorly dispersed pollutants along with strong sunlight results in the creation of ozone at this surface layer.

The prevailing wind pattern in the western portion of the SDAB includes a daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze), which leads to pollutants being blown out to sea at night and returning to land the following day. The prevailing westerly wind pattern is sometimes interrupted by regional "Santa Ana" conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California, Mexico, draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants results in air quality conditions worse than normal.

### 2.1.3 Regulatory Framework

#### 2.1.3.1 Federal Regulations

Ambient Air Quality Standards (AAQS) represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 (42 U.S. Code [U.S.C.] 7401) for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 U.S.C. 7409], the U.S. Environmental Protection Agency (U.S. EPA) developed primary and secondary National AAQS (NAAQS).

Six pollutants of primary concern were designated: ozone, carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), lead (Pb), and particulate matter (PM10 and PM2.5). The primary NAAQS "in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health…." and the secondary standards "…protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 U.S.C. 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (California Air Resources Board [CARB] 2016).

If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as non-attainment area for that pollutant. The SDAB is currently classified as a federal non-attainment area for ozone.

**Table 1**
**Ambient Air Quality Standards**

| Pollutant | Averaging Time | California Standards[1] | | National Standards[2] | | |
|---|---|---|---|---|---|---|
| | | Concentration[3] | Method[4] | Primary[3,5] | Secondary[3,6] | Method[7] |
| Ozone[8] | 1 Hour | 0.09 ppm (180 µg/m$^3$) | Ultraviolet Photometry | – | Same as Primary Standard | Ultraviolet Photometry |
| | 8 Hour | 0.07 ppm (137 µg/m$^3$) | | 0.070 ppm (137 µg/m$^3$) | | |
| Respirable Particulate Matter ($PM_{10}$)[9] | 24 Hour | 50 µg/m$^3$ | Gravimetric or Beta Attenuation | 150 µg/m$^3$ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 20 µg/m$^3$ | | – | | |
| Fine Particulate Matter ($PM_{2.5}$)[9] | 24 Hour | No Separate State Standard | | 35 µg/m$^3$ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 12 µg/m$^3$ | Gravimetric or Beta Attenuation | 12 µg/m$^3$ | 15 µg/m$^3$ | |
| Carbon Monoxide (CO) | 1 Hour | 20 ppm (23 mg/m$^3$) | Non-dispersive Infrared Photometry | 35 ppm (40 mg/m$^3$) | – | Non-dispersive Infrared Photometry |
| | 8 Hour | 9.0 ppm (10 mg/m$^3$) | | 9 ppm (10 mg/m$^3$) | – | |
| | 8 Hour (Lake Tahoe) | 6 ppm (7 mg/m$^3$) | | – | – | |
| Nitrogen Dioxide ($NO_2$)[10] | 1 Hour | 0.18 ppm (339 µg/m$^3$) | Gas Phase Chemi-luminescence | 100 ppb (188 µg/m$^3$) | – | Gas Phase Chemi-luminescence |
| | Annual Arithmetic Mean | 0.030 ppm (57 µg/m$^3$) | | 0.053 ppm (100 µg/m$^3$) | Same as Primary Standard | |
| Sulfur Dioxide ($SO_2$)[11] | 1 Hour | 0.25 ppm (655 µg/m$^3$) | Ultraviolet Fluorescence | 75 ppb (196 µg/m$^3$) | – | Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method) |
| | 3 Hour | – | | – | 0.5 ppm (1,300 µg/m$^3$) | |
| | 24 Hour | 0.04 ppm (105 µg/m$^3$) | | 0.14 ppm (for certain areas)[11] | – | |
| | Annual Arithmetic Mean | – | | 0.030 ppm (for certain areas)[11] | – | |
| Lead[12,13] | 30 Day Average | 1.5 µg/m$^3$ | Atomic Absorption | – | – | High Volume Sampler and Atomic Absorption |
| | Calendar Quarter | – | | 1.5 µg/m$^3$ (for certain areas)[12] | Same as Primary Standard | |
| | Rolling 3-Month Average | – | | 0.15 µg/m$^3$ | | |
| Visibility Reducing Particles[14] | 8 Hour | See footnote 14 | Beta Attenuation and Transmittance through Filter Tape | No National Standards | | |
| Sulfates | 24 Hour | 25 µg/m$^3$ | Ion Chroma-tography | | | |
| Hydrogen Sulfide | 1 Hour | 0.03 ppm (42 µg/m$^3$) | Ultraviolet Fluorescence | | | |
| Vinyl Chloride[12] | 24 Hour | 0.01 ppm (26 µg/m$^3$) | Gas Chroma-tography | | | |

**Table 1**
**Ambient Air Quality Standards**

SOURCE: California Air Resources Board 2016.
NOTES:
ppm = parts per million; ppb = parts per billion; µg/$m^3$ = micrograms per cubic meter; – = not applicable.

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter ($PM_{10}$, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/$m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

[8] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/$m^3$ to 12.0 µg/$m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/$m^3$, as was the annual secondary standards of 15 µg/$m^3$. The existing 24-hour $PM_{10}$ standards (primary and secondary) of 150 µg/$m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour $SO_2$ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99$^{th}$ percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 $SO_2$ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[12] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/$m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[14] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

#### 2.1.3.2 State Regulations

*Criteria Pollutants*

The CARB has developed the California AAQS (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Similar to the federal CAA, the state classifies either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM10 standard, and the state PM2.5 standard. The California CAA, which became effective on January 1, 1989, requires all areas of the State to attain the CAAQS at the earliest practicable date. The California CAA has specific air quality management strategies that must be adopted by the agency responsible for the non-attainment area. In the case of the SDAB, the responsible agency is the San Diego County Air Pollution Control District (SDAPCD).

*Toxic Air Contaminants*

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel particulate matter (DPM) emissions have been identified as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The California Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process. The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

The Children's Environmental Health Protection Act, California Senate Bill (SB) 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the SDAPCD Regulation XII. Of particular concern statewide are DPM emissions. DPM was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants program.

Following the identification of DPM as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB 2000). A stated goal of the plan is to reduce the statewide cancer risk arising from exposure to DPM by 85 percent by 2020.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of DPM and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public's exposure to DPM and other TACs will continue to decline.

*State Implementation Plan*

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SIP plans for San Diego County specifically include the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County (2012), and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide–Updated Maintenance Plan for Ten Federal Planning Areas.

### 2.1.3.3 Local Regulations

*Regional Air Quality Strategy*

The SDAPCD prepared the original 1991/1992 Regional Air Quality Strategy (RAQS) in response to requirements set forth in the California CAA. The California CAA requires areas that are designated state non-attainment areas for ozone, CO, $SO_2$, and $NO_2$ prepare and implement plans to attain the standards by the earliest practicable date. The California CAA does not provide guidance on timing or requirements for attaining the state $PM_{10}$ and $PM_{2.5}$ standards. Attached as part of the RAQS are the Transportation Control Measures (TCMs) adopted by the San Diego Association of Governments (SANDAG). The RAQS and TCM set forth the steps needed to accomplish attainment of NAAQS and CAAQS. The 2022 RAQS are anticipated to be adopted in March 2023. The RAQS seeks to protect public health and the environment by improving air quality. The 2022 update also complements regional actions addressing GHGs and climate change. The primary requirement associated with the 2022 RAQS is to ensure that a revised emission control strategy contained in each RAQS be at least as effective in improving air quality as the control strategy being replaced. The proposed and scheduled measures included in the 2022 RAQS provide additional direct emission reductions of ozone precursors as well as indirect reductions of GHG and PM emissions.

*SDAPCD Rules and Regulations*

The SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD and would apply to the proposed project.

SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions: This rule prohibits discharge of emissions of any air contaminant into the atmosphere from any single source for a period aggregating more than three minutes in any period of 60 consecutive minutes, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart. Construction of the project may result in visible emissions, primarily during earth-disturbing activities, which would be subject to SDAPCD Rule 50. Although visible emissions are less likely to occur during operation of the proposed project, compliance with SDAPCD Rule 50 would be required during both construction and operational phases.

SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance: This rule prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property. Any criteria air pollutant emissions,

TAC emissions, or odors that would be generated during construction or operation of the project would be subject to SDAPCD Rule 51. Violations can be reported to the SDAPCD in the form of an air quality complaint by telephone, email, and online form. Complaints are investigated by the SDAPCD as soon as possible.

**SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust:** This rule regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project area. Construction of the project, primarily during earth-disturbing activities, may result in fugitive dust emissions that would be subject to SDAPCD Rule 55. Fugitive dust emissions are not anticipated during operation of the proposed project.

**SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce volatile organic compound (VOC) emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories. Construction and operation of the project would include application of architectural coatings (e.g., paint and other finishes), which are subject to SDAPCD Rule 67.0.1. Architectural coatings used in the reapplication of coatings during operation of the project would be subject to the VOC content limits identified in SDAPCD Rule 67.0.1, which applies to coatings manufactured, sold, or distributed within the County.

### 2.1.4 Background Air Quality

Air quality is commonly expressed as the number of days per year in which air pollution levels exceed federal standards set by the U.S. EPA or state standards set by CARB. The SDAPCD currently maintains nine air-quality monitoring stations located throughout the greater San Diego metropolitan region and is in the process of permitting two additional air quality monitoring stations (SDAPCD 2021). Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The Chula Vista monitoring station located at 80 East J Street, approximately five miles southwest of the project site, is the nearest station to the project site. The Chula Vista monitoring station measures ozone, $NO_2$, $PM_{10}$, and $PM_{2.5}$. Table 2 provides a summary of measurements collected at the Chula Vista monitoring station for the years 2018 through 2020.

Table 2
Summary of Air Quality Measurements Recorded at the Chula Vista Air Quality Monitoring Station

| Pollutant/Standard | 2019 | 2020 | 2021 |
|---|---|---|---|
| Ozone | | | |
| Federal Max 8-hr (ppm) | 0.076 | 0.086 | 0.066 |
| Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm) | 2 | 4 | 0 |
| Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm) | 1 | 2 | 0 |
| State Max 8-hr (ppm) | 0.077 | 0.086 | 0.67 |
| Days State 8-hour Standard Exceeded (0.07 ppm) | 2 | 4 | 0 |
| Max. 1-hour (ppm) | 0.090 | 0.106 | 0.084 |
| Days State 1-hour Standard Exceeded (0.09 ppm) | 0 | 1 | 0 |
| Nitrogen Dioxide | | | |
| Max 1-hour (ppm) | 0.050 | 0.045 | 0.046 |
| Days State 1-hour Standard Exceeded (0.18 ppm) | 0 | 0 | 0 |
| Days Federal 1-hour Standard Exceeded (0.100 ppm) | 0 | 0 | 0 |
| Annual Average (ppm) | 0.008 | 0.009 | 0.008 |

Table 2
Summary of Air Quality Measurements Recorded at the Chula Vista Air Quality Monitoring Station

| Pollutant/Standard | 2019 | 2020 | 2021 |
|---|---|---|---|
| $PM_{10}$* | | | |
| Federal Max. Daily (μg/m³) | 68.2 | -- | -- |
| Measured Days Federal 24-hour Standard Exceeded (150 μg/m³) | 0 | 0 | 0 |
| Calculated Days Federal 24-hour Standard Exceeded (150 μg/m³) | -- | -- | -- |
| Federal Annual Average (μg/m³) | 17.2 | -- | -- |
| State Max. Daily (μg/m³) | 69.4 | -- | -- |
| Measured Days State 24-hour Standard Exceeded (50 μg/m³) | 1 | 0 | 0 |
| Calculated Days State 24-hour Standard Exceeded (50 μg/m³) | -- | -- | -- |
| State Annual Average (μg/m³) | -- | -- | -- |
| $PM_{2.5}$* | | | |
| Federal Max. Daily (μg/m³) | 18.6 | 46.7 | 24.9 |
| Measured Days Federal 24-hour Standard Exceeded (35 μg/m³) | 0 | 2 | 0 |
| Calculated Days Federal 24-hour Standard Exceeded (35 μg/m³) | 0.0 | 6.1 | 0.0 |
| Federal Annual Average (μg/m³) | 8.1 | 10.7 | 9.5 |
| State Max. Daily (μg/m³) | 18.6 | -- | -- |
| State Annual Average (μg/m³) | -- | -- | -- |

SOURCE: CARB 2023.
ppm = parts per million; μg/m³ = micrograms per cubic meter; -- = Not available.
* Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

#### 2.1.4.1 Ozone

Nitrogen oxides and hydrocarbons (ROG) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. Adverse health effects associated with ozone include breathing difficulties and lung tissue damage, The SDAB is currently designated a federal and state non-attainment area for ozone. During the past two decades, San Diego had experienced a decline in ozone levels due to emission control efforts, despite the region's growth in population and vehicle miles traveled (SDAPCD 2016).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB's ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

#### 2.1.4.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO. Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO. Adverse health effects associated with CO include chest pain in heart patients, headaches, and reduced mental alertness.

#### 2.1.4.3 Particulate Matter

The SDAB is classified as a state non-attainment area for particulate matter ($PM_{10}$ and $PM_{2.5}$). Particulate matter (PM) is a complex mixture of microscopic solid or liquid particles including chemicals, soot, and dust. Anthropogenic sources of direct particulate emissions include crushing or grinding operations, dust stirred up by vehicle traffic, and combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning, and industrial processes. Additionally, indirect emissions may be formed when aerosols react with compounds found in the atmosphere.

Health studies have shown a significant association between exposure to particulate matter and premature death in people with heart or lung diseases. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2021).

As its properties vary based on the size of suspended particles, particulate matter is generally categorized as $PM_{10}$ or $PM_{2.5}$.

$PM_{10}$, occasionally referred to as "inhalable coarse particles" has an aerodynamic diameter of about one-seventh of the diameter of a human hair. High concentrations of $PM_{10}$ are often found near roadways, construction, mining, or agricultural operations.

$PM_{2.5}$, occasionally referred to as "inhalable fine particles" has an aerodynamic diameter of about one-thirtieth of the diameter of a human hair. $PM_{2.5}$ is the main cause of haze in many parts of the U.S. Federal standards applicable to $PM_{2.5}$ were first adopted in 1997.

#### 2.1.4.4 Other Criteria Pollutants

The national and state standards for $NO_2$, oxides of sulfur ($SO_X$), and the previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. The SDAB is also in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility-reducing particulates.

## 2.2 Greenhouse Gases

### 2.2.1 Regulatory Framework

In response to rising concern associated with increasing GHG emissions and global climate change impacts, several plans and regulations have been adopted at the international, national, and state levels with the aim of reducing GHG emissions. Sources of GHG emissions associated with the project would include construction equipment, vehicles, energy (electricity and natural gas), area sources (landscaping equipment), water, and solid waste. The following is a discussion of the plans and regulations most applicable to the project.

#### 2.2.1.1 Federal

The federal Corporate Average Fuel Economy (CAFE) standards determine the fuel efficiency of certain vehicle classes in the U.S. The National Highway Traffic Safety Administration (NHTSA) sets CAFE standards for passenger cars and for light trucks (collectively, light-duty vehicles), and separately sets fuel consumption standards for medium- and heavy-duty trucks and engines. With improved gas mileage, fewer gallons of transportation fuel would be combusted to travel the same distance, thereby reducing nationwide GHG emissions associated with vehicle travel. The most recent standards require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model year 2026.

#### 2.2.1.2 State

##### *Executive Orders and Statewide GHG Emission Targets*

Executive Order (EO) S-3-05 established the following GHG emission reduction targets for the State of California:

- by 2010, reduce GHG emissions to 2000 levels;
- by 2020, reduce GHG emissions to 1990 levels; and
- by 2050, reduce GHG emissions to 80 percent below 1990 levels.

This EO also directs the secretary of the California Environmental Protection Agency to oversee the efforts made to reach these targets, and to prepare biannual reports on the progress made toward meeting the targets and on the impacts to California related to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. With regard to impacts, the report shall also prepare and report on mitigation and adaptation plans to combat the impacts. The first Climate Action Team Assessment Report was produced in March 2006 and has been updated every two years.

EO B-30-15 establishes an interim GHG emission reduction goal for the State of California by 2030 of 40 percent below 1990 levels. This EO also directed all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the pre-existing, long-term 2050 goal identified in EO S-3-05. Additionally, this EO directed the CARB to update its Climate Change Scoping Plan to address the 2030 goal.

AB 1279, approved in September 2022, requires the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below 1990 levels. The bill would require the state board to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies.

##### *California Global Warming Solutions Act*

In response to EO S-3-05, the California Legislature passed AB 32, the California Global Warming Solutions Act of 2006, and thereby enacted Sections 38500–38599 of the California Health and Safety Code. The heart of AB 32 is its requirement that CARB establish an emissions cap and adopt rules and regulations that would reduce GHG emissions to 1990 levels by 2020. AB 32 also required CARB to adopt a plan by January 1, 2009 indicating how emission reductions would be achieved from significant GHG sources via regulations, market mechanisms, and other actions.

Approved in September 2016, SB 32 updates the California Global Warming Solutions Act of 2006. Under SB 32, the state would reduce its GHG emissions to 40 percent below 1990 levels by 2030. In implementing the 40 percent reduction goal, CARB is required to prioritize emissions reductions to consider the social costs of the emissions of GHGs. 'Social costs' is defined as "an estimate of the economic damages, including, but not limited to, changes in net agricultural productivity; impacts to public health; climate adaptation impacts, such as property damages from increased flood risk; and changes in energy system costs, per metric ton of greenhouse gas emission per year."

### *Climate Change Scoping Plan*

As directed by the California Global Warming Solutions Act of 2006, CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) in 2008, which identifies the main strategies California will implement to achieve the GHG reductions necessary to reduce forecasted business as usual emissions in 2020 to the state's historic 1990 emissions level (CARB 2008). In November 2017, CARB released the *2017 Climate Change Scoping Plan Update, The Strategy for Achieving California's 2030 Greenhouse Gas Target* (2017 Scoping Plan; CARB 2017). The 2017 Scoping Plan identifies the state strategy for achieving its 2030 interim reduction target codified by SB 32. Measures under the 2017 Scoping Plan build on existing programs such as the Cap-and-Trade Regulation, Low Carbon Fuel Standard, Advanced Clean Cars Program, Renewable Portfolio Standard, Sustainable Communities Strategy, and the Short-Lived Climate Pollutant Reduction Strategy. Additionally, the 2017 Scoping Plan proposes new policies to address GHG emissions from natural and working lands. The 2022 Scoping Plan Update for Achieving Carbon Neutrality (2022 Scoping Plan; CARB 2022) was adopted in December 2022. The 2022 Scoping Plan assesses the progress towards the 2030 GHG emissions reduction target identified in the 2017 Scoping Plan, and lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The 2022 Scoping Plan identifies strategies related to clean technology, energy development, natural and working lands, and others, and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

### *Regional Emissions Targets – Senate Bill 375*

SB 375, the 2008 Sustainable Communities and Climate Protection Act, was signed into law in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan. The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under state housing law. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that MPO's Regional Transportation Plan. The County's MPO is the SANDAG, and the region's Sustainable Communities Strategy/Regional Transportation Plan (SCS/RTP) is San Diego Forward: The 2021 Regional Plan (see Section 2.2.1.3). The current targets for the region are a 15 percent reduction in GHG emissions per capita from automobiles and light-duty trucks compared to 2005 levels by 2020 and a 19 percent reduction by 2035. These targets are periodically reviewed and updated.

### *Renewables Portfolio Standard*

The Renewables Portfolio Standard (RPS) promotes diversification of the state's electricity supply and decreased reliance on fossil fuel energy sources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "Initial RPS"), the goal has been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, SB 2 (1X) codified California's 33 percent RPS goal. SB 350 (2015) increased California's renewable energy mix goal to 50 percent by year 2030. SB 100 (2018) further increased the standard set by SB 350 establishing the RPS goal of 44 percent by the end of 2024, 52 percent by the end of 2027, and 60 percent by 2030.

### *California Code of Regulations, Title 24 – California Building Code*

The California Code of Regulations, Title 24, is referred to as the California Building Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction, including plumbing, electrical, interior acoustics, energy efficiency, handicap accessibility, and so on. Of particular relevance to GHG reductions are the CBC's energy efficiency and green building standards as outlined below.

#### *Title 24, Part 6 – Energy Efficiency Standards*

The California Code of Regulations, Title 24, Part 6 is the California Energy Efficiency Standards for Residential and Nonresidential Buildings (also known as the California Energy Code). This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy consumption. The Energy Code is updated periodically to incorporate and consider new energy-efficient technologies and methodologies as they become available, and incentives in the form of rebates and tax breaks are provided on a sliding scale for buildings achieving energy efficiency above the minimum standards.

The current 2022 Title 24 Building Energy Efficiency Standards went into effect on January 1, 2023. The 2022 Energy Code increases on-site renewable energy generation from solar, increases electric load flexibility to support grid reliability, reduces emissions from newly constructed buildings, reduces air pollution for improved public health, and encourages adoption of environmentally beneficial efficient electric technologies.

New construction and major renovations must demonstrate their compliance with the current Energy Code through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC. The compliance reports must demonstrate a building's energy performance through use of CEC approved energy performance software that shows iterative increases in energy efficiency given the selection of various heating, ventilation, and air conditioning; sealing; glazing; insulation; and other components related to the building envelope. The CEC estimates that non-residential buildings will use 30 percent less energy through implementation of the 2019 Energy Code, mainly due to lighting upgrades.

#### *Title 24, Part 11 – California Green Building Standards*

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11 first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The most recent 2022 CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of non-residential and residential structures. Local jurisdictions must enforce the minimum mandatory Green Building Standards and may adopt additional amendments for stricter requirements. The mandatory measures are related to planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

Similar to the reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen mandatory requirements must be demonstrated through completion of compliance forms and worksheets.

2022 CALGreen also includes two tiers of residential and non-residential voluntary measures that encourage local jurisdictions to raise the sustainability goals Tier 1 adds additional requirements beyond the mandatory measures, and Tier 2 further increases the requirements.

#### 2.2.1.3 Local

*County of San Diego*

The County General Plan applies to the unincorporated area of the county and is the County's long-term blueprint for the vision of the future. It reflects an environmentally sustainable approach to planning that balances the need for adequate infrastructure, housing, and economic vitality while maintaining and preserving existing communities, agricultural areas, and open spaces. The General Plan contains goals and policies specific to reducing GHG emissions, including efficient and compact growth and development; increasing energy efficiency and use of renewable energy sources; increasing recycling; and improving access to sustainable transportation. The County General Plan incorporates smart growth and land planning principles intended to reduce vehicle miles traveled, and thereby reduce GHG emissions. Specifically, the General Plan directed preparation of a County Climate Action Plan (CAP) with reduction targets; development of regulations to encourage energy-efficient building design and construction; and development of regulations that encourage energy recovery and renewable energy facilities, among other actions. These planning and regulatory efforts are intended to ensure that actions of the County do not impede AB 32 and SB 375 mandates.

As such, on February 14, 2018, the County Board of Supervisors (Board) adopted a CAP, which identifies specific strategies and measures to reduce GHG emissions in the largely rural, unincorporated areas of San Diego County as well as County government operations (County of San Diego 2018). The CAP aims to meet the State's 2020 and 2030 GHG reduction targets (AB 32 and SB 32, respectively), and demonstrate progress towards the 2050 GHG reduction goal.

On September 30, 2020, the Board voted to set aside its approval of the County's 2018 CAP and related actions because the Final Supplemental Environmental Impact Report (2018 CAP SEIR) was found to be out of compliance with the California Environmental Quality Act (CEQA). In response to this Board action, the County is preparing a CAP Update to revise the 2018 CAP and correct the items identified by the 4th District Court of Appeal in San Diego within the Final 2018 CAP SEIR that were not compliant.

Pending adoption of a new CAP, the County would continue to implement the 26 GHG reduction measures and sustainability initiatives and programs identified in the 2018 CAP to reduce GHG emissions to meet the State's 2030 reduction target.

*Regional Transportation Plan/Sustainable Communities Strategy*

San Diego Forward: The 2021 Regional Plan is the 2050 RTP prepared by SANDAG and adopted in December 2021. The RTP establishes an implementation plan for how the region will grow over the next 30 years. Developed in accordance with California Senate Bill 375, the RTP includes an SCS. An SCS demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. While the purpose of an SCS is to reduce GHG emissions due to mobile sources, it also results in a decrease in mobile sources of criteria pollutants. Enhanced public transit service combined with incentives for land use development that provides a better market for public transit will play an important role in the SCS.

The SCS focuses on the following five main strategies, referred to as the 5 Big Moves, that will result in a more efficient transportation system:

1. Complete Corridors – Complete corridors act as the backbone of the entire regional transportation system, using technology, infrastructure improvements, pricing, and connectivity to support all forms of movement.

2. Transit Leap – Transit leap offers people a network of high-capacity, high-speed, and high-frequency transit services that will incorporate new modes of transit while also providing improved existing services.

3. Mobility Hubs – Mobility hubs are the centers of activity where a high concentration of people, destinations, and travel choices converge. They offer on-demand travel options and safe streets to enhance connections to high-quality transit while also making it easier for people to take short trips without needing a car.

4. Flexible Fleets – Flexible fleets offer people a variety of on-demand, shared vehicles, including microtransit, bikeshare, scooters, and other modes of transportation, to connect them to transit and make travel easy within Mobility Hubs.

5. Next Operating System (OS) – Next OS refers to an integrated digital platform that ties the transportation system together. Next OS enables the transportation system to be managed in real time so that people can be connected immediately to the modes of transportation that work best for them for any given situation and at any time.

### 2.2.2 Existing GHG Emission Inventories

CARB performs statewide GHG inventories. The inventory is divided into broad sectors of economic activity. Emissions are quantified in million metric tons of $CO_2$ equivalent (MMT $CO_2e$). Table 3 shows the estimated statewide GHG emissions for the years 1990, 2014, and 2018. Although annual GHG inventory data is available for years 2000 through 2018, the years 1990, 2014, and 2018 are highlighted in Table 3 because 1990 is the baseline year for established reduction targets, 2014 corresponds to the same years for which inventory data for the County is available, and 2018 is the most recent data available.

**Table 3**
**California GHG Emissions by Sector**

| Sector | 1990[1] Emissions in MMT $CO_2e$ (% total)[2] | 2014[3] Emissions in MMT $CO_2e$ (% total)[2] | 2018[3] Emissions in MMT $CO_2e$ (% total)[2] |
|---|---|---|---|
| Electricity Generation | 110.5 (25.7%) | 89.0 (20.1%) | 63.3 (14.9%) |
| Transportation | 150.6 (35.0%) | 167.4 (37.8%) | 173.8 (40.9%) |
| Industrial | 105.3 (24.4%) | 103.7 (23.4%) | 101.3 (23.8%) |
| Commercial | 14.4 (3.4%) | 21.3 (4.8%) | 23.9 (5.6%) |
| Residential | 29.7 (6.9%) | 27.2 (6.1%) | 30.5 (7.2%) |
| Agriculture & Forestry | 18.9 (4.4%) | 34.8 (7.8%) | 32.6 (7.7%) |
| Not Specified | 1.3 (0.3%) | -- | -- |
| **Total[4]** | **430.7** | **443.4** | **425.3** |

SOURCE: CARB 2007 and 2020.
[1]1990 data was obtained from the CARB 2007 source and based on the Intergovernmental Panel on Climate Change fourth assessment report Global Warming Potentials.
[2]Percentages may not total 100 due to rounding.
[3]2014 and 2018 data was retrieved from the CARB 2020 source and are based on the Intergovernmental Panel on Climate Change fourth assessment report Global Warming Potentials.
[4]Totals may vary due to independent rounding.

A County emissions inventory was prepared for baseline year 2014. Table 4 summarizes the sources and quantities of community emissions. The largest source of emissions is transportation.

| Table 4<br>County of San Diego GHG Emissions in 2014 | |
|---|---|
| Sector | 2014 GHG Emissions<br>(MT $CO_2e$) |
| On-Road Transportation | 1,456,060 (45%) |
| Electricity | 760,638 (24%) |
| Solid Waste | 338,107 (11%) |
| Natural Gas | 290,712 (9%) |
| Agriculture | 163,696 (5%) |
| Water | 134,269 (4%) |
| Off-Road Transportation | 36,927 (1%) |
| Wastewater | 21,183 (1%) |
| Propane | 9,914 (<1%) |
| **Total** | **3,211,505** |
| SOURCE: County of San Diego 2018. | |

## 3.0 Thresholds of Significance

### 3.1 Air Quality

The County has approved the Air Quality Guidelines (March 19, 2007) that essentially mirror Appendix G of the CEQA Guidelines and are intended to provide consistency in the environmental analysis. The following Appendix G Guidelines provide a slight revision to the thresholds provided in the County's Air Quality Guidelines. A project will have a significant adverse environmental impact related to air quality if it would:

1. Conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is non-attainment under an applicable NAAQS or CAAQS ($PM_{10}$, $PM_{2.5}$, or exceed quantitative thresholds for ozone precursors: $NO_X$ and ROG; see Table 5).
3. Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, day-care centers and project residents and employees) *to* substantial pollutant concentration including air toxics such as diesel particulates.
    a. Place sensitive receptors near CO hot spots or creates CO hot spots near sensitive receptors.
    b. Result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of best available control technology for toxics or a health hazard index greater than one would be deemed as having a potentially significant impact.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SDAPCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related impacts. However, the district does specify Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources (SDAPCD Rules 20.1, 20.2, and 20.3). The County's Air Quality Guidelines allow the use of the SDAPCD AQIA as CEQA significance thresholds. The County's screening level thresholds (SLTs), which are based on SDAPCD Rules 20.1, 20.2, and 20.3, are shown in Table 5. The SLTs were adopted from the SDAPCD AQIA trigger level thresholds to align with attainment of the NAAQS and be protective of public health. Thus, air quality emissions below the SLTs would meet the NAAQS. The NAAQS were developed to protect public health, specifically the health of "sensitive" populations, including people with asthma, children, and the elderly. There is no level specified for ROG

in the SDAPCD AQIA criteria. The County's threshold is based on the VOC threshold of significance from the South Coast Air Quality Management District. Note that the terms ROG and VOC are considered interchangeable.

**Table 5**
**County of San Diego Screening Level Thresholds**

| Pollutant | Emission Rate | | |
|---|---|---|---|
| | Pounds/Hour | Pounds/Day | Tons/Year |
| Respirable Particulate Matter ($PM_{10}$) | -- | 100 | 15 |
| Fine Particulate Matter ($PM_{2.5}$) | -- | 55[a] | 10[a] |
| Oxides of Nitrogen ($NO_X$) | 25 | 250 | 40 |
| Oxides of Sulfur ($SO_X$) | 25 | 250 | 40 |
| Carbon Monoxide (CO) | 100 | 550 | 100 |
| Lead and Lead Compounds | -- | 3.2 | 0.6 |
| Volatile Organic Compounds (VOCs) | -- | 75[b] | 13.7[c] |

SOURCE: SDAPCD, Rules 20.1, 20.2, 20.3; County of San Diego 2007.
[a]Based on the U.S. EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the South Coast Air Quality Management District.
[b]Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley.
[c]13.7 tons per year threshold based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

## 3.2 Greenhouse Gases

Based on the CEQA Guidelines Appendix G, impacts related to GHG emissions would be significant if the project would:

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

State CEQA Guidelines Section 15064.4 states that "the determination of the significance of greenhouse gas emissions (GHG) calls for careful judgment by the lead agency, consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." Section 15064.4(b) further states that a lead agency should consider the following non-exclusive factors when assessing the significance of GHG emissions:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The State CEQA Guidelines Section 15064(h)(1) states that "the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable." A cumulative impact may be significant when the project's incremental effect, though individually limited, is cumulatively considerable.

The County does not currently have locally adopted screening criteria for GHG thresholds. Pending adoption of a new CAP, appropriate GHG emissions thresholds were considered for purposes of this analysis. The CEQA Guidelines do not provide numeric or quantitative thresholds of significance for evaluating GHG emissions. Instead, they leave the determination of threshold significance up to the lead agency and provide it the discretion to consider thresholds of significance previously adopted or recommended by other public agencies or experts, provided that the lead agency's decision is supported by substantial evidence (CEQA Guidelines Sections 15064.7[b] and 15064.7[c]). Additionally, any public agency may also use an environmental standard as a threshold of significance, as it would promote consistency in significance determination and integrate environmental review with other environmental program planning and regulations (CEQA Guidelines Section 15064.7[d]).

Based on the specific characteristics of this project including its low vehicle miles travelled (VMT) generation, current guidance developed by the BAAQMD was used to evaluate GHG emissions. For land use development projects, the BAAQMD recommends using the approach endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal. 4th 204), which evaluates a project based on its effect on California's efforts to meet the state's long-term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less than significant impact on climate change under CEQA. If a project would contribute its "fair share" of what would be required to achieve those long-term climate goals, then a reviewing agency can find that the impact would not be significant because the project would help to solve the problem of global climate change (62 Cal. 4th 220–223). If a land use project incorporates all the design elements necessary for it to be carbon neutral by 2045, then it would contribute its portion of what is needed to achieve the state's climate goals and would be considered to do its "fair share" to mitigate the cumulative problem. It can therefore be determined that a project would have a less than cumulatively considerable climate impact. Unlike criteria air pollutants or TACs, which have a local and regional impact to ambient air quality, GHGs are pollutants of global concern; therefore, the location of where they are emitted is immaterial. And, because this guidance supports how a project would contribute its "fair share" of the statewide long-term GHG reduction goals, it is not specific to the BAAQMD region and can also be applied in the San Diego region. BAAQMD's *Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plan* (Justification Report, BAAQMD 2022), adopted April 2022, is provided in Attachment 1. The information provided in the Justification Report is intended to provide the substantial evidence that lead agencies need to support their significance determinations using these thresholds.

The Justification Report analyzes what would be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045. A new land use development project being built today needs to incorporate the following design elements to do its "fair share" of implementing the goal of carbon neutrality by 2045:

A) Projects must include, at a minimum, the following project design elements:
    1) Buildings
        a) The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
        b) The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2) Transportation
   a) Achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
      (i) Residential projects: 15 percent below the existing VMT per capita
      (ii) Office projects: 15 percent below the existing VMT per employee
      (iii) Retail projects: no net increase in existing VMT
   b) Achieve compliance with off-street electric vehicle (EV) requirements in the most recently adopted version of California Green Building Standards (CALGreen) Tier 2.

## 4.0 Calculation Methodology

The project's criteria pollutant and GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1 (CAPCOA 2022). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. CalEEMod can be used to calculate emissions from mobile (on-road vehicles), energy (electricity and natural gas), area (fireplaces, consumer products [cleansers, aerosols, and solvents], landscape maintenance equipment, architectural coatings), water and wastewater, and solid waste sources. Criteria pollutants are estimated in terms of pounds per day, and GHG emissions are estimated in terms of total MT $CO_2e$.

The analysis methodology and input data are described in the following sections. Where project-specific data was not available, model inputs were based on information provided in the CalEEMod User's Guide (CAPCOA 2022). Operational emissions were calculated for the projected soonest project operational year of 2024.

## 4.1 Emission Sources

### 4.1.1 Construction Emissions

Construction activities emit criteria pollutants and GHGs primarily though combustion of fuels (mostly diesel) in the engines of off-road construction equipment, and through combustion of diesel and gasoline in on-road construction vehicles and construction worker commute vehicles. Smaller amounts of GHGs are also emitted through the energy use embodied in water use for fugitive dust control.

Every phase of the construction process emits criteria pollutants and GHGs in volumes directly related to the quantity and type of construction equipment used when building the project. GHG emissions associated with each phase of project construction are calculated construction fuel emission factors and worker trip emission factors. The number and types of construction equipment are calculated based on the project-specific design. Equipment for all phases of construction is estimated based on the project size.

Primary inputs are the numbers of each type of equipment and the length of each construction stage. Construction emissions were modeled assuming that the project would begin in February 2025 and last approximately 18 months. CalEEMod can estimate the required construction equipment. The estimates are based on surveys, performed by the South Coast Air Quality Management District and the Sacramento Metropolitan Air Quality Management District of typical construction projects, which provide a basis for scaling equipment needs and schedule with a project's size. Emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. Project emissions were modeled for the following stages: site preparation, grading, building construction, paving, and architectural coatings. Site grading would include approximately 7,600 cubic yards of export. Default CalEEMod equipment usage was modeled and is summarized in Table 6.

| Table 6<br>Construction Parameters | | | | |
|---|---|---|---|---|
| Construction Phase | Phase Duration (Days) | Equipment[1] | Amount | Hours per Day |
| Site Preparation | 10 | Rubber Tired Dozers | 3 | 8 |
| | | Tractors/Loaders/Backhoes | 4 | 8 |
| Grading | 30 | Excavators | 2 | 8 |
| | | Grader | 1 | 8 |
| | | Rubber Tired Dozer | 1 | 8 |
| | | Scrapers | 2 | 8 |
| | | Tractors/Loaders/Backhoes | 2 | 8 |
| Building Construction | 300 | Crane | 1 | 7 |
| | | Forklifts | 3 | 8 |
| | | Generator Set | 1 | 8 |
| | | Tractors/Loaders/Backhoes | 3 | 7 |
| | | Welder | 1 | 8 |
| Paving | 20 | Pavers | 2 | 8 |
| | | Paving Equipment | 2 | 8 |
| | | Rollers | 2 | 8 |
| Architectural Coatings | 20 | Air Compressor | 1 | 6 |

### 4.1.2 Operational Emissions

#### 4.1.2.1 Mobile Emissions

Mobile source emissions would originate from traffic generated by the project. Mobile source operational emission estimates are based on the trip rate, trip length, and size of each land use. Daily trip generation rates were obtained from the Transportation Assessment Memorandum prepared for the project (Kimley-Horn 2021) and are based on the mini-warehouse (self-storage and RV storage) rates from the Institute of Transportation Engineers *Trip Generation Manual* (10th ed., 2017). The project would generate 191 daily trips (Kimley-Horn 2021). Default trip lengths and default vehicle emission factors for the soonest operational year of 2024 were used.

#### 4.1.2.2 Energy Use Emissions

Energy use emissions are generated by activities that utilize electricity and natural gas as energy sources. GHGs are emitted during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated in association with a building's overall operation. Electric power generation accounts for the second largest sector contributing to both inventoried and projected statewide GHG emissions. Electricity use does not result in emissions of criteria pollutants. Combustion of fossil fuel (natural gas) emits criteria pollutants and GHGs directly into the atmosphere. When this occurs in a building, it is considered a direct emissions source associated with the building. CalEEMod estimates emissions from the direct combustion of natural gas for space and water heating.

CalEEMod estimates emissions from energy use by multiplying average rates of non-residential energy consumption by the quantities of non-residential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider.

Within Title 24 of the California Code of Regulations (Building Standards Code) is Part 6, the Building Energy Efficiency Standards (Energy Code). The California Energy Commission adopted the 2022 Energy Code in August 2021, and it took effect January 1, 2023. The Energy Code contains energy conservation standards applicable to particular end use categories for all new or altered residential and nonresidential buildings throughout California. Energy consumption values are based on the California Energy Commission's 2018–2030 Uncalibrated Commercial Sector Forecast and the 2019 Residential Appliance Saturation Survey. GHG emissions were calculated using the default CalEEMod Version 2022.1 emission factors.

The project would be served by San Diego Gas & Electric (SDG&E). Therefore, SDG&E's specific energy-intensity factors (i.e., the amount of $CO_2$, methane [$CH_4$], and nitrous oxide [$N_2O$] per kilowatt-hour) are used in the calculations of GHG emissions. Current and forecasted year 2024 SDG&E energy-intensity factors are included in CalEEMod 2022.1. Emissions were modeled using the forecasted year 2024 energy-intensity factors. Statewide RPS goals are summarized in Section 2.2.1.2. As SDG&E continues to procure renewable energy sources in line with state goals, the energy-intensity factors will decrease.

#### 4.1.2.3 Area Source Emissions

Area sources include criteria pollutant and GHG emissions that would occur from the use of landscaping equipment. The use of landscape equipment emits criteria pollutant and GHGs associated with the equipment's fuel combustion. Default statewide emission rates from landscaping equipment were developed using the CARB Small Off-Road Engines Model v1.1 (CARB 2020). Area sources also include consumer products and architectural coatings. However, only criteria pollutant emissions are associated with these sources and not GHG emissions. Area source emissions were calculated using default CalEEMod emission factors.

#### 4.1.2.4 Water and Wastewater Emissions

The amount of water consumed and wastewater generated by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both $CH_4$ and $N_2O$.

CalEEMod Version 2022.1 calculates outdoor water use based the Department of Water Resources Model Water Efficient Landscape Ordinance and calculates non-residential indoor water used based on the Pacific Institute's *Waste Not, Want Not: The Potential for Urban Water Conservation in California* 2003 (as cited in CAPCOA 2022). Wastewater treatment is based on the region-specific distribution of wastewater treatment methods (CAPCOA 2022). Water and wastewater emissions were calculated using default CalEEMod data.

#### 4.1.2.5 Solid Waste Emissions

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. To calculate the GHG emissions generated by disposing of solid waste for the project, the total volume of solid waste was calculated using waste disposal rates identified by California Department of Resources Recycling and Recovery (CalRecycle). The methods for quantifying GHG emissions from solid waste are based on the Intergovernmental Panel on Climate Change method, using the degradable organic content of waste. GHG emissions associated with the project's waste disposal were calculated using these parameters.

#### 4.1.2.6 Refrigerant Emissions

Small amounts of GHG emissions result from refrigerants used in air conditioning and refrigeration equipment. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the

equipment lifetime and then derives average annual emissions from the lifetime estimate. Emissions due to refrigerants were calculated using CalEEMod default values, which are based on industry data from the U.S. EPA.

## 4.2 Project Emissions

Using the methodology summarized in Section 4.1, the project's construction- and operational-related criteria pollutant and GHG emissions were calculated. CalEEMod output is provided in Attachment 2 and the results are summarized below.

### 4.2.1 Construction Emissions

#### 4.2.1.1 Criteria Pollutants

Construction emissions would vary by day depending on the equipment used and the construction phase. Table 7 shows the total projected construction maximum daily emission levels for each criteria pollutant based on the maximum construction equipment usage summarized in Table 6. As shown, maximum construction emissions would be less than the County's SLTs for all criteria pollutants and would therefore result in a less than significant impact.

**Table 7**
**Summary of Maximum Construction Emissions**
**(pounds per day)**

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| Site Preparation | 4 | 40 | 36 | <1 | 22 | 12 |
| Grading | 4 | 41 | 34 | <1 | 12 | 5 |
| Building Construction | 2 | 13 | 17 | <1 | 1 | 1 |
| Paving | 1 | 8 | 11 | <1 | 1 | <1 |
| Architectural Coatings | 33 | 1 | 2 | <1 | <1 | <1 |
| **Maximum Daily Emissions** | **33** | **41** | **36** | **<1** | **22** | **12** |
| *County Screening Level Thresholds* | *75* | *250* | *550* | *250* | *100* | *55* |

#### 4.2.1.2 Greenhouse Gases

Table 8 summarizes the total construction-related GHG emissions. Based on guidance from the SCAQMD, total construction GHG emissions resulting from a project should be amortized over 30 years and added to operational GHG emissions to account for their contribution to GHG emissions over the lifetime of a project (SCAQMD 2009). Thus, total construction emissions were divided by 30 and added to the operational emissions discussed in Section 4.2.2.

**Table 8**
**Project Construction-Related GHG Emissions**
**(MT $CO_2e$ per Year)**

| Year | Project GHG Emissions |
|---|---|
| 2023 | 332 |
| 2024 | 316 |
| **Total** | **648** |
| Amortized over 30 years | 22 |

### 4.2.2 Operational Emissions

#### 4.2.2.1 Criteria Pollutants

Table 9 shows the total projected operational maximum daily emission levels for each criteria pollutant. As shown, the project's daily operational emissions would not exceed the County's screening-level thresholds for any pollutant and, therefore, would result in a less than significant impact.

**Table 9**
**Summary of Project Operational Emissions**
**(pounds per day)**

| Source | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | ROG | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
| Area Sources | 4 | <1 | 6 | <1 | <1 | <1 |
| Energy Sources | <1 | <1 | <1 | <1 | <1 | <1 |
| Mobile Sources | 1 | 1 | 6 | <1 | <1 | <1 |
| **Total** | **5** | **1** | **12** | **<1** | **<1** | **<1** |
| *County Screening Level Thresholds* | *75* | *250* | *550* | *250* | *100* | *55* |

#### 4.2.2.2 Greenhouse Gases

Table 10 summarizes the total project GHG emissions.

**Table 10**
**Total Project GHG Emissions**
**(MT $CO_2e$ per Year)**

| Source | Project GHG Emissions |
|---|---|
| Mobile | 220 |
| Energy | 283 |
| Area | 2 |
| Water | 65 |
| Waste | 39 |
| Refrigerants | <1 |
| Construction (amortized) | 22 |
| **Total GHG Emissions** | **662** |

## 5.0 Project Impacts

### 5.1 Air Quality

*1. Would the project conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP?*

Project consistency is based on whether the project would conflict with or obstruct implementation of the RAQS and/or applicable portions of the SIP, which would lead to increases in the frequency or severity of existing air quality violations.

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD's strategies for achieving the NAAQS and CAAQS. The SDAB is designated a non-attainment area for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward

attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and $NO_X$, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and, by extension, to maintaining and improving air quality. The RAQS was most recently adopted in 2016.

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the RTP and SCS. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the General Plan would not conflict with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event that a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The project site is designated VR-2 (Village Residential) in the County's General Plan and is zoned RR (Rural Residential). Mini-warehouses are an allowable use with the issuance of a MUP. The project would construct a storage and RV parking use and would not result in an increase in growth projections used to develop the RAQS. Additionally, as stated in the Transportation Assessment Memorandum, the project is considered a locally-serving retail/service project (Kimley-Horn 2021). These types of projects generally improve the convenience of retail close to home and have the effect of reducing vehicle travel. As discussed in Section 4.1.2, vehicle emissions were calculated using the standard trip generation rate for mini-warehouse uses and the default trip length and are therefore conservative since they do not reflect that the project is a locally-serving project. As discussed in the Transportation Assessment Memorandum, the project would have a less than significant transportation impact. Further, the project would not result in construction or operational emissions in excess of the applicable significance thresholds for all criteria pollutants. The project would, therefore, not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not obstruct or conflict with implementation of the RAQS. Impacts would be considered less than significant.

2. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is non-attainment under an applicable NAAQS or CAAQS (*$PM_{10}$, $PM_{2.5}$, or exceed quantitative thresholds for ozone precursors: $NO_X$ and ROG; see Table 5*)?*

The region is classified as attainment for all criteria pollutants except ozone, $PM_{10}$, and $PM_{2.5}$. The SDAB is a non-attainment area for the 8-hour federal and state ozone standards, and a non-attainment area for 1-hour state ozone standards. Ozone is not emitted directly, but is a result of atmospheric activity of precursors. $NO_X$ and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone.

A project is determined to have a significant direct air quality impact if the project exceeds any of the following thresholds:

- 250 pounds per day (lbs/day) of $NO_X$ or 75 lbs/day of VOC;
- CO that exceeds a one-hour concentration of 20 parts per million (or an eight-hour average of 9 parts per million, or 550 lbs/day; or
- 55 lbs/day of $PM_{2.5}$; or
- Increases the ambient $PM_{10}$ concentration by 5 micrograms per cubic meter or 100 lbs/day of $PM_{10}$.

The County's guidelines state that even if direct air quality impacts from a project are less than significant, the project may still have a significant cumulative impact on air quality if the emissions are cumulatively considerable when

viewed in combination with other reasonably foreseeable future projects within proximity of the proposed action. Projects that would individually cause a significant direct air quality impact with respect to VOC, $NO_X$, $PM_{10}$, or $PM_{2.5}$ would also be considered to have a cumulatively considerable net increase in emissions.

As shown in Tables 7 and 9, emissions of ozone precursors (ROG and $NO_X$), $PM_{10}$, and $PM_{2.5}$ from construction and operation would be below the applicable SLTs. Therefore, the project would not generate emissions in quantities that would result in an exceedance of the NAAQS or CAAQS for ozone, $PM_{10}$, or $PM_{2.5}$, and direct impacts would be less than significant. As discussed in Section 3.1, the County's SLTs align with attainment of the NAAQS which were developed to protect the public health, specifically the health of "sensitive" populations, including people with asthma, children, and the elderly. Thus, the project would have a less than significant impact to public health.

Air quality impacts are basin-wide, and air quality is affected by all pollutant sources in the basin. As the individual project thresholds are designed to help achieve attainment with cumulative basin-wide standards, they are also appropriate for assessing the project's contribution to cumulative impacts. As shown in Tables 7 and 9, emissions would be less than the applicable SLTs. As emissions would be less than the SLTs, the project is not expected to result in a cumulatively considerable impact. Further, project construction would be limited and would occur over a short-term period. A list of cumulative projects within the vicinity of the project site was obtained from County staff. The cumulative project closest to the project site is the Carriage Hills Estates project located west of Sweetwater Road. However, construction of this project is complete. All other cumulative projects are located at greater distances (more than 3,000 feet) from the project site. Given the developed nature of the project vicinity and the short duration of project construction, it is unlikely that other major construction activities would occur in the same area at the same time.

The Transportation Assessment Memorandum prepared an analysis of the intersection of Quarry Road and Sweetwater Road. This intersection would not be signalized, would operate at Level of Service B or C, and peak-hour trips would be less than 2,000 (Kimley-Horn 2021). The project is not anticipated to cause roadway intersections to fail or result in CO hotspots.

Based on the above analysis, project construction and operation would not result in a cumulatively considerable net increase of any criteria pollutant, and cumulative impacts would be less than significant.

3. *Would the project expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates?*

Air quality regulators typically define sensitive receptors as schools (Preschool–12th grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purposes of CEQA analysis, in the County, the definition of a sensitive receptor also includes residents. Sensitive receptors near the project site include residential uses to the south and west. The closest sensitive receptors are residential uses located approximately 40 feet from the project footprint.

The two primary emissions of concern regarding health effects for land development projects are diesel-fired particulates and CO. Projects that would site sensitive receptors near potential CO hot spots (i.e., exceedance of County CO thresholds) or would contribute vehicle traffic to local intersections where a CO hot spot could occur would be considered as having a potentially significant impact. The project does not propose a land use that would include sensitive receptors. As discussed under Threshold 2, the project is not anticipated to cause roadway intersections to fail or result in CO hotspots.

Additionally, projects that would result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of best available control technology for toxics (T-BACT) or a threshold of 10 in 1 million for project's implementing T-BACT measures or a health hazard index greater than one would be considered as having a potentially significant impact.

Construction of the project would result in the generation of DPM emissions from the use of off-road diesel construction activities and on-road diesel equipment. Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the project would occur over a short-term, 1.5-year period. The dose to which the sensitive receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (Office of Environmental Health Hazard Assessment 2015). Thus, if the duration of proposed construction activities near any specific sensitive receptor were 18 months during an analyzed 30-year period, the total exposure would only be five percent (18 months ÷ 30 years) of the total exposure period used for health risk calculation. Further, the project would implement construction best management practices and would be conducted in accordance with CARB regulations. Specifically, the project would implement the following T-BACT measures during construction, which would be incorporated as project designed features and included in the project conditions of approval:

- The construction fleet shall use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or utilize CARB/U.S. EPA Engine Certification Tier 3 or better, or other equivalent methods approved by the CARB.
- The engine size of construction equipment shall be the minimum size suitable for the required job.
- Construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications.
- Per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons.

Due to the short duration of construction activities, DPM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million (the significance threshold for projects implementing T-BACT measures) of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of noncarcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels; off-road diesel engine retrofits; and new, low-emission diesel engine types, the DPM emissions of individual equipment would be substantially reduced. Due to the limited time of exposure, project construction would not expose sensitive receptors to substantial pollutant concentrations.

Once operational, the project would not create or expose sensitive receptors to CO hot spots. Impacts would be less than significant.

4. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

The project does not include the construction or operation of heavy industrial or agricultural uses that are typically associated with odor complaints. During construction, diesel equipment may generate some temporary nuisance odors. Sensitive receptors near the project site include residential uses located to the south and west. However, exposure to odors associated with project construction would be short term and temporary in nature. There would be no permanent or operational source of odors associated with the project. Impacts would be less than significant.

## 5.2 Greenhouse Gas

1. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

As discussed in Section 3.2, this analysis follows guidance from the BAAQMD to evaluate the significance of the project's GHG emissions. To do its "fair share" of implementing the goal of carbon neutrality by 2045, a new land use development projects built today need to incorporate design elements related to building energy use and transportation.

Building Energy Use

Energy use emissions are generated by activities within buildings that utilize electricity and natural gas as energy sources. GHGs are emitted during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect but are calculated in association with a building's overall operation. Natural gas usage emits GHGs directly when it is burned for space heating, cooking, hot water heating and similar uses, whereas electricity usage emits GHGs indirectly to the extent that it is generated by burning carbon-based fuels. For the building sector to achieve carbon neutrality, natural gas usage will need to be phased out and replaced with electricity usage, and electrical generation will need to shift to 100 percent carbon-free sources. To support these shifts, new projects need to be built without natural gas and with no inefficient or wasteful energy usage.

The project would result in GHG emissions from energy used in the proposed buildings. The project would be designed to run on all electric energy sources. Although not currently enacted as law, the 2022 Scoping Plan Update calls for all new commercial buildings to have all electric appliances by 2029 (CARB 2022). By designing the project to fully utilize electric energy within all proposed buildings, the project would not conflict with ultimate implementation of the 2022 Scoping Plan.

Additionally, the project is not expected to result in the wasteful or inefficient use of energy. All new construction would be required to comply with the energy code in effect at the time of construction, which ensures efficient building construction. The project would not conflict with energy reduction policies of the County General Plan including COS-14.3, which requires new development to implement sustainable practices to conserve energy. GHG emissions associated with electricity use would be eliminated as California decarbonizes the electrical generation infrastructure as committed to by 2045 through SB 100, the 100 percent Clean Energy Act of 2018. Therefore, the project would contribute its "fair share" of what is required to achieve carbon neutrality of buildings by 2045.

Transportation

GHG emissions from vehicles come from the combustion of fossil fuels in vehicle engines. Decarbonization of the transportation infrastructure serving land use development will come from shifting the motor vehicle fleet to EVs, coupled with a shift to carbon-free electricity to power those vehicles. Land use projects cannot directly control whether and how fast these shifts are implemented, but they can, and do, have an important indirect influence on California's transition to a zero-carbon transportation system. The Justification Report states that "Motor vehicle transportation does not need to be eliminated entirely in order for the land use sector to achieve carbon neutrality, as carbon-free vehicle technology can be used (e.g., EVs powered by carbon-free electricity sources). But for that goal to be realistically implemented by 2045, California will need to reduce its per-capita VMT. How land use development is designed and sited can have a significant influence on how much VMT the project would generate." New land use development can influence transportation-related emissions in two areas related to how it is designed and built. First, new land use projects need to provide sufficient EV charging infrastructure to serve the needs of project users who would be driving EVs. Second, new land use projects can influence transportation related GHG emissions by reducing the amount of VMT associated with the project.

The 2022 CALGreen went into effect on January 1, 2023, and the project would be subject to these requirements, at a minimum. The project would meet the 2022 CALGreen Tier 2 voluntary requirements for EV parking detailed in Table A5.106.5.3.2 of the 2022 California Green Building Standards Code (Title 24, Part 11, CALGreen) and summarized in Table 11. The project proposes 21 parking spaces. In accordance with 2022 CALGreen Tier 2 voluntary requirements, the project would provide 3 EV capable spaces provided with Electric Vehicle Supply Equipment (EVSE) and 8 EV capable spaces. EV capable means a vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging. The 3 spaces with EVSE equipment would include installation of the required branch circuit, electric vehicle charging connectors, plugs, and all other apparatus to allow for the transfer of energy between the premises and the EV. Adherence to these Tier 2 voluntary requirements would be required prior to issuance of building permit predicated on sufficient load capacity from SDG&E in the project area.

**Table 11**
**2022 CALGreen Non-Residential Voluntary Tier 2 EV Requirements**

| Total Number of Actual Parking Spaces | Tier 2 Number of Required EV Capable Spaces | Tier 2 Number of EVCS (EV Capable Spaces Provided with EVSE)[2] |
|---|---|---|
| 0-9 | 3 | 0 |
| 10-25 | 8 | 3 |
| 26-50 | 17 | 6 |
| 51-75 | 28 | 9 |
| 76-100 | 40 | 13 |
| 101-150 | 57 | 19 |
| 151-200 | 79 | 26 |
| 201 and Over | 45 percent of total parking spaces[1] | 33 percent of EV capable spaces[1] |

EVCS = Electric vehicle charging station; EVSE = electric vehicle supply equipment
SOURCE: 2022 CALGreen Table A5.106.5.3.2.
[1]Calculation for spaces shall be rounded up to the nearest whole number.
[2]The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.

A VMT evaluation has been prepared as part of the Transportation Assessment Memorandum prepared for the project (Kimley Horn 2021). The Office of Planning and Research (OPR) guidelines outlined in *Technical Advisory on*

*Evaluating Transportation Impacts in CEQA* note the following: "local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact." Locally serving retail/service projects generally improve the convenience of retail close to home and have the effect of reducing vehicle travel. The project would serve its local community with self-storage and RV parking, which would reduce regional VMT by providing convenient storage solutions closer to home than currently exist. Therefore, the project is considered a locally-serving retail/service project and is considered to have a less than significant impact related to VMT. The project would contribute its "fair share" of what is required to eliminate GHG emissions from the transportation sector by reducing levels of VMT.

The project's "fair share" contribution towards the statewide goal of carbon neutrality by 2045, combined with the energy efficiency measures and the project's less than significant impact related to VMT, demonstrates that the project would not make a cumulatively considerable contribution to GHG emissions.

Therefore, based on the BAAQMD recommended approach discussed in Section 3.2, the project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment, and impacts would be less than significant.

2. *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs?*

As discussed in Section 2.2.1.1, EO S-3-05 and EO B-30-15 established GHG emission reduction targets for the state, and AB 32 launched the CARB Climate Change Scoping Plan that outlined the reduction measures needed to reach the 2020 target, which the state has achieved. As required by SB 32, CARB's 2017 Climate Change Scoping Plan outlines reduction measures needed to achieve the interim 2030 target. AB 1279, the California Climate Crisis Act, codified the carbon neutrality target as 85 percent below 1990 levels by 2045. The 2022 Scoping Plan was adopted in December 2022. The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. As detailed above, the project would provide its "fair share" contribution towards the statewide goal of carbon neutrality by 2045.

Project emissions would decline beyond the buildout year of the project due to continued implementation of federal, state, and local reduction measures, such as increased federal and state vehicle efficiency standards, and SDG&E's increased renewable sources of energy in accordance with Renewable Portfolio Standards goals. Based on currently available models and regulatory forecasting, project emissions would continue to decline through at least 2050. Given the reasonably anticipated decline in project emissions that would occur post-construction, the project is in line with the GHG reductions needed to achieve the 2045 GHG emission reduction targets identified by AB 1279.

The project was also evaluated for consistency with the San Diego Forward, which is the Regional Transportation Plan/Sustainable Communities Strategy that demonstrates how the region would meet its transportation-related GHG reduction goals. The project would be consistent with San Diego Forward as it would not conflict with implementation of its key goals and 5 Big Moves (see Section 2.2.1.3). As detailed above, the project would implement 2022 CALGreen Tier 2 voluntary requirements for EV parking, supporting the goal of achieving healthy air and reduced GHG emissions regionwide. Further, project VMT impacts would be less than significant. Therefore, the project would not conflict with the transportation related GHG reduction goals outlined in San Diego Forward.

The project would not conflict with implementation of statewide GHG reduction goals, the 2022 Scoping Plan, San Diego Forward, or the County General Plan. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs, and impacts would be less than significant.

## 6.0 Conclusion

As detailed in this analysis, the project would not conflict with implementation of the RAQS, result in construction- or operational-related emissions that exceed applicable screening thresholds or expose sensitive receptors to substantial pollutant concentrations or odors. Additionally, the project would not result in a considerable increase in GHG emissions or conflict with implementation of GHG reduction plans. Air quality and GHG impacts would be less than significant.

If you have any questions about the results of this analysis, please contact me at jfleming@reconenvironmental.com or (619) 308-9333 extension 177.

Sincerely,

Jessica Fleming
Environmental Analyst

JLF:jg

## 7.0 Certification

The following is a list of preparers, persons, and organizations involved with the air quality and GHG assessment.

RECON Environmental, Inc.
- Jessica Fleming, County-approved Air Quality Consultant
- Wendy Loeffler, Senior Biologist/Project Manager
- Benjamin Arp, GIS Specialist
- Jennifer Gutierrez, Production Specialist

## 8.0 References Cited

Bay Area Air Quality Management District (BAAQMD)

2022 Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. April 2022.

California Air Pollution Control Officers Association (CAPCOA)

2022 California Emissions Estimator model (CalEEMod). User's Guide Version 2022.1.

California Air Resources Board (CARB)

2000 Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. California Air Resources Board. Stationary Source Division, Mobile Source Control Division. October.

2007 California Greenhouse Gas Inventory – Summary by Economic Sector. Last updated November 19, 2007.

2008 Climate Change Scoping Plan: A Framework for Change. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. December.

2011 In-Use Off-Road Equipment (Construction, Industrial, Ground Support, and Oil Drilling) 2011 Inventory Model.

2016 Ambient Air Quality Standards. California Air Resources Board. October 1.

2017 The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target. January 20.

2020 Greenhouse Gas Inventory Data—2000 to 2018 (last updated October 15, 2020). https://ww2.arb.ca.gov/ghg-inventory-data.

2022 Scoping Plan Update for Achieving Carbon Neutrality.

2023 California Air Quality Data Statistics. California Air Resources Board Internet Site. http://www.arb.ca.gov/adam/welcome.html. Accessed February 15, 2023.

Kimley-Horn
2021 Memorandum – Transportation Assessment for the Quarry Storage MAP (5790 Quarry Road) Self-Storage and RV Parking Facility. Prepared for Tim Karp, Insite Property Group. September 29, 2021.

Office of Environmental Health Hazard Assessment (OEHHA)
2015 Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual), February.

San Diego, County of
2007 Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality. Land Use and Environment Group. March 19, 2007.

2018 County of San Diego Climate Action Plan. SCH # 2016101055. February 2018.

2023 Personal Communication with Nicolas Gustafson, County of San Diego Environmental Planner, in meeting with RECON Environmental on February 15, 2023.

San Diego Air Pollution Control District (SDAPCD)
2016 2016 Revision of the Regional Air Quality Strategy for the San Diego Region. Final – December 2016.

South Coast Air Quality Management District (SCAQMD)
2009 Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group 14. November 19, 2009.

U.S. Climate Data
2021 Climate for La Mesa California. Accessed at https://www.usclimatedata.com/climate/la-mesa/california/united-states/usca0566. June 14, 2021.

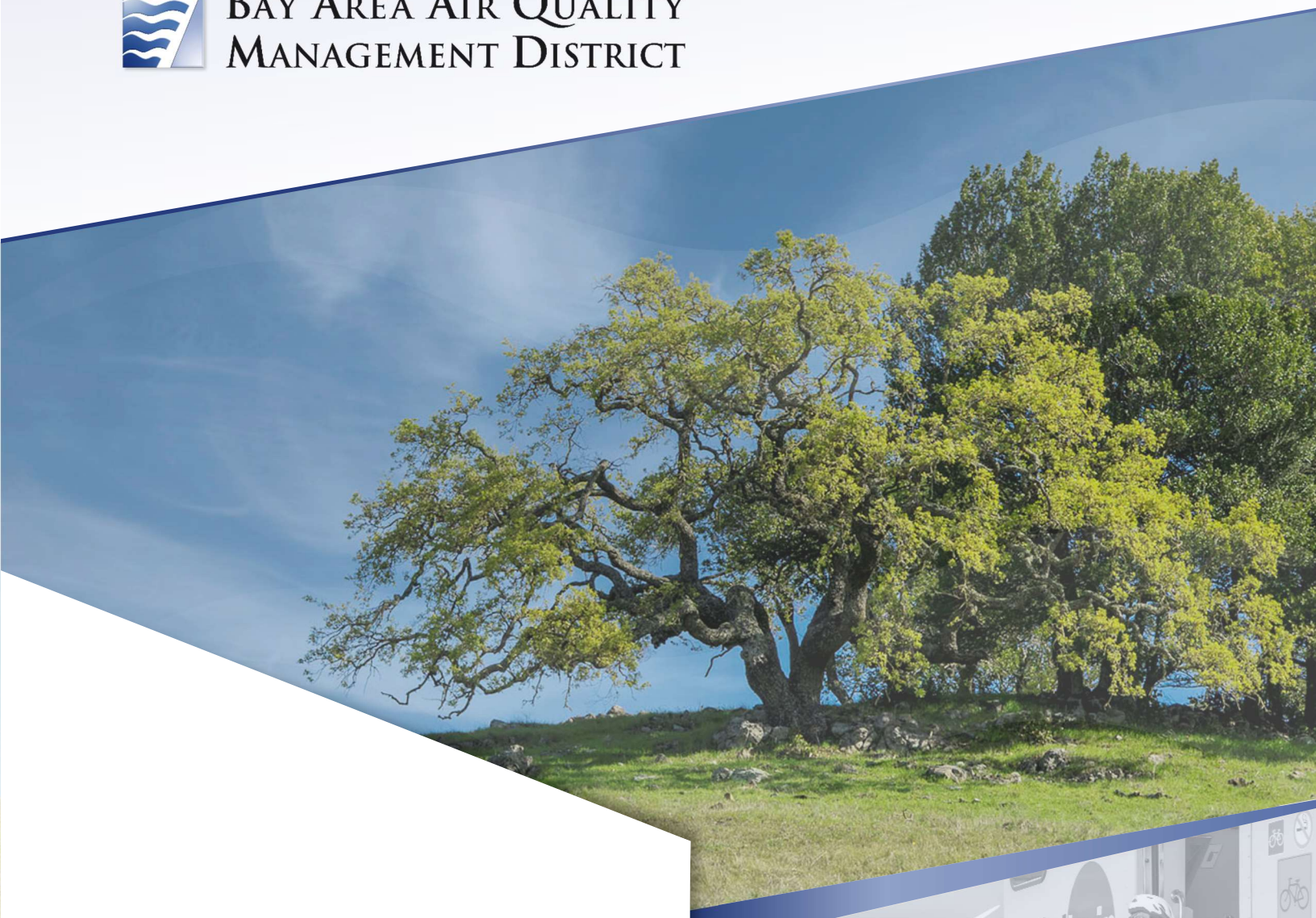
U.S. Environmental Protection Agency (U.S. EPA)
2021 Particulate Matter (PM) Pollution. Accessed at https://www.epa.gov/pm-pollution. Last updated June 10, 2021.

# ATTACHMENTS

# ATTACHMENT 1

Justification Report

Bay Area Air Quality Management District



Justification Report:

# CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans


April 2022

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Justification Report

# CEQA Thresholds for Evaluating the Significance of Climate Impacts


**Veronica Eady**
Senior Deputy Executive Officer

**Damian Breen**
Senior Deputy Executive Officer

**Greg Nudd**
Deputy Air Pollution Control Officer

**Adan Schwartz**
Acting District Counsel

PRINCIPAL CONTRIBUTORS:

**Henry Hilken**
Director of Planning and Climate Protection

**Alexander "Sandy" Crockett**
Acting Senior Assistant Counsel

**Abby Young**
Climate Protection Manager

**Wendy Goodfriend, Ph.D.**
Air Quality Planning Manager

**Jakub Zielkiewicz**
Senior Advanced Projects Advisor

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 Beale Street, Suite 600
San Francisco, CA 94105
415.749.5000

TECHNICAL ASSISTANCE FROM:

ASCENT

**Honey Walters**
Principal-in-Charge

**Poonam Boparai**
Principal

**Hannah Kornfeld, AICP**
Project Manager



April 2022

# TABLE OF CONTENTS

## Figures



## Tables

# LIST OF ABBREVIATIONS

| | |
|---|---|
| ºC | degrees Celsius |
| AB | Assembly Bill |
| Air District | Bay Area Air Quality Management District |
| CALGreen | California Green Building Standards Code |
| CARB | California Air Resources Board |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| DC | direct current |
| EIR | environmental impact report |
| EV | electric vehicle |
| GHG | greenhouse gas |
| HCD | California Department of Housing and Community Development |
| OPR | Governor's Office of Planning and Research |
| RPS | Renewables Portfolio Standard |
| SB | Senate Bill |
| VAC | voltage of alternating current |
| VMT | vehicle miles traveled |
| ZEV | zero-emission vehicle |

This page intentionally left blank.

# 1 INTRODUCTION AND EXECUTIVE SUMMARY

This report presents the Bay Area Air Quality Management District's (Air District's) recommended thresholds of significance for use in determining whether a proposed project will have a significant impact on climate change. The Air District recommends that these thresholds of significance be used by public agencies to comply with the California Environmental Quality Act (CEQA).

Evaluating climate impacts under CEQA can be challenging because global climate change is inherently a cumulative problem. Climate change is not caused by any individual emissions source but by a large number of sources around the world emitting greenhouse gases (GHGs) that collectively create a significant cumulative impact. CEQA requires agencies in California to analyze such impacts by evaluating whether a proposed project would make a "cumulatively considerable" contribution to the significant cumulative impact on climate change. (See CEQA Guidelines Sections 15064[h] and 15064.4[b].)[1] But CEQA does not provide any further definition of what constitutes a cumulatively considerable contribution in this context. These thresholds of significance are intended to assist public agencies in determining whether proposed projects they are considering would make a cumulatively considerable contribution to global climate change, as required by CEQA.

The Air District's recommended thresholds of significance are summarized below, with a detailed discussion of the basis for the thresholds presented in the remainder of this report. The information provided in this report is intended to provide the substantial evidence that lead agencies will need to support their determinations about significance using these thresholds. This information also provides the substantial evidence to support adoption of these thresholds by the Air District's Board of Directors. (See CEQA Guidelines Section 15064.7 [thresholds must be adopted by the Board of Directors through a public review process and be supported by substantial evidence].)

## 1.1 THRESHOLDS FOR LAND USE PROJECTS

For land use development projects, the Air District recommends using the approach endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal.4th 204), which evaluates a project based on its effect on California's efforts to meet the State's long-term climate goals. As the Supreme Court held in that case, a project that would be consistent with meeting those goals can be found to have a less-than-significant impact on climate change under CEQA. If a project would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal.4th 220–223).

[1] The 2021 State CEQA Guidelines, including Appendices F and G, can be found at the following website: https://www.califaep.org/docs/CEQA_Handbook_2021.pdf.

Applying this approach, the Air District has analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality[2] by 2045. The Air District has found, based on this analysis, that a new land use development project being built today needs to incorporate the following design elements to do its "fair share" of implementing the goal of carbon neutrality by 2045:

| Thresholds for Land Use Projects (Must Include A or B) |
|---|
| A. Projects must include, at a minimum, the following project design elements:<br>1. Buildings<br>a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).<br>b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.<br>2. Transportation<br>a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:<br>i. Residential projects: 15 percent below the existing VMT per capita<br>ii. Office projects: 15 percent below the existing VMT per employee<br>iii. Retail projects: no net increase in existing VMT<br>b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. |
| B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). |

If a project is designed and built to incorporate these design elements, then it will contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. If the project does not incorporate these design elements, then it should be found to make a significant climate impact because it will hinder California's efforts to address climate change. These recommended thresholds for land use projects are discussed in more detail in Section 4.

[2] "Carbon neutrality" is defined in Executive Order B-55-18 as the point at which the removal of carbon pollution from the atmosphere meets or exceeds carbon emissions. Carbon neutrality is achieved when carbon dioxide and other GHGs generated by sources such as transportation, power plants, and industrial processes are less than or equal to the amount of carbon dioxide that is stored, both in natural sinks and mechanical sequestration.

## 1.2 THRESHOLDS FOR GENERAL PLANS AND RELATED PLANNING DOCUMENTS

The Air District recommends a similar approach for cities and counties adopting general plans and related planning documents that will guide long-range development in their jurisdictions. The Air District recommends that cities and counties evaluate such plans based on whether they will be consistent with California's long-term climate goal of achieving carbon neutrality by 2045. To be consistent with this goal, these plans should reduce GHG emissions in the relevant jurisdiction to meet an interim milestone of 40 percent below the 1990 emission levels by 2030, consistent with Senate Bill (SB) 32, and to support the State's goal of carbon neutrality by 2045. Cities and counties planning to develop in a manner that is not consistent with meeting these GHG reduction targets will have a significant climate impact because they will hinder California's efforts to address climate change.

| Thresholds for Plans (Must Include A or B) |
|---|
| A. Meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045; or |
| B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). |

The Air District also strongly recommends that cities and counties adopt climate action plans to document specific strategies and implementation measures to achieve these 2030 and 2045 goals. Robust climate action plans that meet the requirements of CEQA Guidelines Section 15183.5(b) can provide such jurisdictions with a number of benefits. If properly developed, they will provide the substantial evidence a jurisdiction needs to demonstrate that its general plan updates and related planning documents will not have a significant climate impact as outlined in the preceding paragraph. In addition, a jurisdiction can use a qualified climate action plan to evaluate individual land use projects under CEQA. This gives the local jurisdiction the flexibility to tailor requirements for land use projects in its community to the specific circumstances of that community rather than use the Air District's general thresholds for land use projects described above. In addition, a jurisdiction can adopt a climate action plan immediately, without having to wait for its next general plan update cycle.

Thresholds for general plans and related planning documents are discussed in more detail in Section 5. Guidance from the Air District on how to develop and adopt a comprehensive climate action plan that satisfies the detailed requirements of CEQA Guidelines Section 15183.5(b) is set forth in Appendix C to the Air District's Air Quality Guidelines.

## 1.3 Important Considerations for Using These Thresholds

The Air District has developed these thresholds of significance based on typical residential and commercial land use projects and typical long-term communitywide planning documents such as general plans and similar long-range development plans. As such, these thresholds may not be appropriate for other types of projects that do not fit into the mold of a typical residential or commercial project or general plan update.

Lead agencies should keep this point in mind when evaluating other types of projects. A lead agency does not necessarily need to use a threshold of significance if the analysis and justifications that were used to develop the threshold do not reflect the particular circumstances of the project under review. Accordingly, a lead agency should not use these thresholds if it is faced with a unique or unusual project for which the analyses supporting the thresholds as described in this report do not squarely apply. In such cases, the lead agency should develop an alternative approach that would be more appropriate for the particular project before it, considering all of the facts and circumstances of the project on a case-by-case basis.

In addition, lead agencies should keep in mind that the science of climate change – and California's regulatory and policy responses to it – are constantly evolving. As the technical and policy considerations on which these thresholds of significance are based advance in the future, lead agencies may need to make adjustments to the thresholds as set forth herein to be consistent with the most current information. As the California Supreme Court has explained, lead agencies are required to "ensure that CEQA analysis stays in step with evolving scientific knowledge and state regulatory schemes" (*Cleveland National Forest Foundation v. SANDAG* (2017) 3 Cal.5th 497, 519). Making appropriate adjustments to these thresholds in light of future developments will ensure that lead agencies comply with this important CEQA mandate.

# 2 FRAMEWORK FOR ANALYZING IMPACTS UNDER CEQA

The central requirement of the CEQA environmental analysis is to determine whether implementing a project will result in any significant adverse impact on the environment, either individually or cumulatively.

This mandate requires the reviewing agency first to evaluate whether the project will have a significant impact by itself and then to consider whether the project may contribute to a significant cumulative impact in conjunction with other past, present, and reasonably foreseeable future projects that also contribute to the impact.[3]

In the cumulative context, the analysis has two parts. To evaluate cumulative impacts, the agency must assess (1) whether the overall cumulative impact will be significant and, (2) if the overall impact is significant, whether the incremental contribution that the individual project under review will add to the overall cumulative problem will be cumulatively considerable. As Section 15064(h)(1) of the CEQA Guidelines states:

> When assessing whether a cumulative effect requires an EIR [environmental impact report], the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable.

Both parts of this test must be met for a project's impact to be treated as significant under CEQA. If the overall cumulative impact does not rise to the level of a "significant" impact, or if the project's incremental

[3] A cumulative impact is the change in the environment that results from the incremental impact of the project under review in conjunction with other past, present, and reasonably foreseeable probable future projects (CEQA Guidelines Section 15355).

contribution is not cumulatively considerable, then the project's impact is not treated as significant. (See *San Francisco Baykeeper, Inc. v. State Lands Commission* [2015] [242 Cal.App.4th 202, 222] [project not significant if "the cumulative impact is insignificant or if the project's incremental contribution to the impact is not cumulatively considerable"]; see also CEQA Guidelines Sections 15130[a][3] and 15064[h].)

Cumulatively considerable means that the incremental effect of the specific project under review will be significant when viewed in the context of the overall cumulative problem (CEQA Section 21083[b][2]). CEQA does not require that any incremental addition to a significant cumulative impact, no matter how small, must necessarily be treated as cumulatively considerable. The statute does not require a so-called "one additional molecule" standard, and some projects' incremental contributions would be so minor that their impact does not have to be treated as significant even though the projects would add an additional amount to the significant cumulative impact (*Communities for a Better Environment v. California Resources Agency* [2002] [103 Cal.App.4th 98, 120]; see also CEQA Guidelines Section 15064[h][4].) The level at which the incremental addition becomes cumulatively considerable will depend on the nature of the particular cumulative impact being evaluated. The ultimate test is whether any additional amount should be considered significant in the context of the existing cumulative effect. (CEQA Section 21083[b][2]).)

Applying these principles, the environmental impact analysis under CEQA is a four-step process:

- Step One: **Determine the level at which an impact on the environmental resource under consideration becomes "significant."** This is the touchstone for assessing whether the project may have a significant impact individually or may contribute to a cumulative impact that is significant. The level at which the impact becomes significant will depend on the nature of the environmental resource being evaluated.
- Step Two: **Evaluate whether the project under review would degrade the environmental resource to such an extent that there would be an impact exceeding the "significant" level determined during Step One**. If implementing the project would cause an impact to exceed that level all by itself, then the project's impact is treated as significant under CEQA and the project requires preparation of an EIR, implementation of feasible mitigation measures to reduce the impact to a less-than-significant level, and consideration of alternatives that would avoid or lessen any significant impacts. If the project under review would not degrade the environmental resource to such an extent that there would be a significant impact, the analysis proceeds to Step Three.
- Step Three: **Determine whether the contribution of the project combined with the contributions of all other past, present, and reasonably foreseeable future projects would exceed the "significant" level determined during Step One.** If implementing the project would not cause a significant impact by itself, it still must be evaluated to determine whether it would make a cumulatively considerable contribution to a significant cumulative impact. The first element of that analysis is to assess the overall cumulative impact caused by the project in conjunction with other past, present, and reasonably foreseeable future projects affecting the same resource. If the overall cumulative impact exceeds the "significant" level determined during Step One, then the project would contribute to a significant cumulative impact, and the analysis proceeds to Step Four to determine whether that contribution is cumulatively considerable.

- Step Four: **Determine whether the project's incremental contribution is cumulatively considerable.** The final step is to determine whether the project's incremental contribution is cumulatively considerable in light of the overall cumulative impact. If implementing the project would make a cumulatively considerable contribution to a significant cumulative impact, the impact is considered significant under CEQA and the agency must prepare an EIR, impose feasible mitigation measures to bring the incremental contribution below the cumulatively considerable level, and consider alternatives.

The CEQA analysis applies this four-step process to evaluating climate impacts just as it does for all other impacts.

# 3 ANALYZING IMPACTS ON GLOBAL CLIMATE CHANGE

CEQA requires agencies to consider a project's impacts on global climate change in the same manner that they consider impacts on other areas in the environmental review document. Climate change is unique, however, given the global nature of the problem.

Step One in the analysis requires determining the level at which climate change becomes a "significant" environmental problem. There is a general consensus that we need to limit the warming of the planet to no more than 1.5 degrees Celsius (ºC) in order to maintain a sustainable global climate. Aiming to limit global warming to 1.5ºC is a goal recognized by the Paris Agreement on Climate Change and in California's Executive Order B-55-18, and the Intergovernmental Panel on Climate Change (IPCC) has documented the serious adverse consequences that are expected if the climate warms by more than that amount (IPCC 2018). A 1.5ºC rise in global temperatures is therefore an appropriate measure of the level at which climate change will become significant. A global temperature increase of more than that amount will constitute a significant climate impact.

Proceeding to Step Two in the analysis, it is clear that no individual project could have a significant climate impact all by itself, because no project by itself could cause the global temperature to rise by 1.5ºC. Indeed, it is difficult to conceive of any project whose GHG emissions would cause global temperature to change in any detectable way. The California Supreme Court acknowledged this situation in its *Center for Biological Diversity* decision, explaining that "an individual project's emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 204, 219 [citation omitted]).

Moving on to the cumulative analysis, Step Three asks whether the project would contribute to a significant cumulative impact in conjunction with all other past, present, and foreseeable future projects that are contributing to the same impact. With respect to climate change, clearly the answer is yes. Climate change is a cumulative problem caused by millions or billions of individually minor sources all around the globe contributing to the global impact, and it is unquestionably a significant cumulative problem.[4] The

[4] CEQA requires the cumulative analysis to consider the contributions from all projects that contribute to the impact (i.e., all projects that contribute to the degradation of the environmental resource being evaluated). (See *City of Long Beach v. Los Angeles Unified School Dist.* [2009]

global climate has already warmed by approximately 1.0ºC compared to a preindustrial baseline, and IPCC projects that continued growth in GHG emissions will cause that warming to reach 1.5 ºC by 2030–2053 if nothing is done to limit it (IPCC 2018).

The analysis therefore focuses on Step Four: determining whether the project's GHG emissions would make a cumulatively considerable contribution to the significant problem of global climate change. As the Supreme Court noted in its *Center for Biological Diversity* decision, the question is "whether the project's incremental addition of greenhouse gases is 'cumulatively considerable' in light of the global problem, and thus significant" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 219). This is the challenge that has faced lead agencies in undertaking the CEQA analysis: how to determine the level at which a project becomes cumulatively considerable.

# 4 THRESHOLDS FOR LAND USE DEVELOPMENT PROJECTS

## 4.1 THE SUPREME COURT'S "FAIR SHARE" ANALYSIS AND CONSISTENCY WITH CALIFORNIA'S LONG-TERM CLIMATE GOALS

The crucial question in the CEQA climate impact analysis is whether the project under review would make a cumulatively considerable contribution to the significant cumulative problem of global climate change. For land use development projects, the Air District recommends using the approach endorsed by the California Supreme Court in the *Center for Biological Diversity* decision, discussed above, which focuses on determining whether the project would be doing its "fair share" to implement California's ambitious long-term climate goals. This approach evaluates whether a project's GHG emissions are cumulatively considerable based on "their effect on the state's efforts to meet [those] goals…." (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 221.) If a new land use project would serve California's pressing need to provide housing, jobs, and related infrastructure in a manner that supports achieving those climate goals, then it would help to solve the climate change problem, and its GHG emissions should not be treated as cumulatively considerable. As the Supreme Court held, "consistency with meeting [those] statewide goals [is] a permissible significance criterion for project emissions" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 220), and an agency's "choice to use that criterion does not violate CEQA" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 223).

This approach is based on the principle inherent in CEQA that an individual project would make a less-than-cumulatively-considerable contribution if it would do its part to address the cumulative problem. As the Supreme Court explained, "if a plan is in place to address a cumulative problem, a new project's incremental addition to the problem will not be 'cumulatively considerable' if it is consistent with the plan

[176 Cal.App.4th 889, 907], *Bakersfield Citizens for Local Control v. City of Bakersfield* [2004] [124 Cal.App.4th 1184, 1219 fn. 10], and *Kings County Farm Bureau v. City of Hanford* [1990] [221 Cal.App.3d 692, 720]). In the context of global climate change, this means considering all sources of GHG emissions around the globe that contribute to the global problem. Given the large number of sources involved, the analysis needs to use the "summary of projections" method to assess the magnitude of the total cumulative impact, not the "list of projects" method. (See CEQA Guidelines Section 15130[b].)

and is doing its fair share to achieve the plan's goals" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 223). No individual project needs to solve the entire cumulative problem by itself. Indeed, no individual project could, given that the problem is the result of such a large number of diverse emission sources. But each individual project does need to do what is required of it to ensure that the overall solution is implemented, and if it does that, then its impact on climate change can be treated as less than cumulatively considerable. As the Supreme Court put it in the climate context, "[t]o the extent a project incorporates efficiency and conservation measures sufficient to contribute its portion of the overall greenhouse gas reductions necessary [to achieve the State's climate goals], one can reasonably argue that the project's impact is not cumulatively considerable, because it is helping to solve the cumulative problem..." (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 220 [internal quotation marks omitted]).

## 4.2 USING THE EXECUTIVE ORDER B-55-18 AND THE 2045 CARBON NEUTRALITY GOAL IN THE "FAIR SHARE" ANALYSIS

The *Center for Biological Diversity* case was decided in 2015, and it specifically addressed only the Assembly Bill (AB) 32 goal of attaining 1990 emission levels by 2020 statewide, not the longer-term goal for 2045. However, we are now past the 2020 milestone. At this point, the focus has shifted to the longer-term goals and ultimately to carbon neutrality by 2045. Moreover, the Supreme Court has recognized the necessity and appropriateness of using these longer-term goals as the touchstone for the CEQA analysis. As it held in *Cleveland National Forest Foundation v. SANDAG*, these longer-term goals express "what scientific research has determined to be the level of emissions reductions necessary to stabilize the climate by midcentury and thereby avoid catastrophic effects of climate change" (*Cleveland National Forest Foundation v. SANDAG* [2017] 3 Cal.5th 497, 513). They represent "the scientifically-supported level of emissions reduction needed to avoid significant disruption of the climate and [are] used as the long-term driver for state climate change policy development" (*Cleveland National Forest Foundation v. SANDAG* [2017] 3 Cal.5th 497, 513 (citation omitted)[5]).

The consistency analysis approved by the Supreme Court in *Center for Biological Diversity* can be applied to these longer-term goals in the same way it was applied to the AB 32 2020 goal. If a project would be consistent with meeting these long-term State climate goals, then its climate impact can be seen as less than cumulatively considerable "because it is helping to solve the cumulative problem of greenhouse gas emissions as envisioned by California law" (*Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 62 Cal.4th 220 (citation omitted)).

Moreover, although the 2045 goal is set forth in an executive order and not in a statute, as with the 2020 AB 32 goal that the Supreme Court addressed in *Center for Biological Diversity*, the Executive Order B-55-18 goal is appropriate to use for developing a threshold of significance given the science supporting it. The Supreme Court explicitly rejected the argument that an executive order cannot be used for this purpose because it has not been adopted by statute in the *SANDAG* case. It explained that the executive order at

[5] These statements were referring to the older Executive Order S-3-05, which included an 80-percent reduction target by 2050, but they apply with equal force to the more recent Executive Order B-55-18.

issue there "expresses the pace and magnitude of reduction efforts that the scientific community believes is necessary to stabilize the climate. This scientific information has important value to policymakers and citizens in considering the emission impacts of a project…" (*Cleveland National Forest Foundation v. SANDAG* [2017] 3 Cal.5th 515). Agencies are required to design their CEQA analyses "based to the extent possible on scientific and factual data," and if an executive order best embodies the current state of the scientific and factual data, an agency may use it as the basis for its CEQA analysis (*Ibid*. (quoting CEQA Guidelines Section 15064[b]).

## 4.3 DETERMINING A LAND USE PROJECT'S "FAIR SHARE" FOR GETTING TO CARBON NEUTRALITY BY 2045

The "fair share" analysis looks at how a new land use development project needs to be designed and built to ensure that it will be consistent with the goal of carbon neutrality by 2045. This is California's current articulation of what will be required to achieve long-term climate stabilization at a sustainable level, as articulated in Executive Order B-55-18. If a land use project incorporates all of the design elements necessary for it to be carbon neutral by 2045, then it will contribute its portion of what is needed to achieve the State's climate goals and will help to solve the cumulative problem. It can therefore be found to make a less-than-cumulatively-considerable climate impact.

A land use project's "fair share" will not necessarily include everything that will need to happen in order to achieve carbon neutrality by 2045. There will likely be certain aspects of achieving carbon neutrality that are beyond the scope of how a land use project is designed and thus cannot reasonably be allocated to its "fair share." For example, becoming carbon neutral by 2045 will require California's electrical power generators to shift to 100-percent carbon-free energy resources, which is not something that can be controlled through the design of new land use projects. But for those aspects that can be controlled or influenced by how such projects are designed, projects need to address those aspects in order to contribute their "fair share" of what is needed to attain carbon neutrality. If a project is not designed and built to ensure that it can be carbon neutral by 2045, then it will impede California's ability to achieve its long-term climate goals and should be treated as making a cumulatively considerable contribution to global climate change.

To determine the "fair share," the analysis should therefore focus on the design elements that need to be incorporated into the project in order to lay the foundation for achieving carbon neutrality by 2045. As GHG emissions from the land use sector come primarily from building energy use and from transportation, these are the areas that need to be evaluated to ensure that the project can and will be carbon neutral. With respect to building energy use, this can be achieved by replacing natural gas with electric power and by eliminating inefficient or wasteful energy usage. This will support California's transition away from fossil fuel–based energy sources and will bring the project's GHG emissions associated with building energy use down to zero as our electric supply becomes 100 percent carbon free. With respect to transportation, projects need to be designed to reduce project-generated VMT and to provide sufficient electric vehicle (EV) charging infrastructure to support the shift to EVs. As explained below, the Air District recommends using a threshold of a 15-percent reduction in project-generated VMT per capita compared with existing

levels (or other, more current percentage to the extent further analysis shows that a different level of reduction is needed) and providing EV charging infrastructure as specified in the California Green Building Standards Code (CALGreen) Tier 2 standards. If a land use project being designed and built today incorporates the design elements necessary for the project to be carbon neutral by 2045, then it will contribute its "fair share" to achieving the State's climate goals. A lead agency can therefore conclude that it will make a less-than-cumulatively-considerable climate impact.

There is no proposed construction-related climate impact threshold at this time. Greenhouse gas emissions from construction represent a very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions.

The following sections provide a more detailed discussion of the framework for evaluating the design elements necessary for a project to be consistent with California's long-term climate goals. The Air District recommends that lead agencies use the design elements as the threshold of significance for land use projects under the Supreme Court's "fair share" approach discussed above.

| Thresholds for Land Use Projects (Must Include A or B) |
|---|
| A. Projects must include, at a minimum, the following project design elements:<br>1. Buildings<br>a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).<br>b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.<br>2. Transportation<br>a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:<br>i. Residential projects: 15 percent below the existing VMT per capita<br>ii. Office projects: 15 percent below the existing VMT per employee<br>iii. Retail projects: no net increase in existing VMT<br>b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. |
| B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). |

### 4.3.1 Building Energy Use

Energy used in residential and nonresidential buildings in California comes primarily from natural gas and electricity, the generation and consumption of which can result in GHG emissions. Natural gas usage emits GHGs directly when it is burned for space heating, cooking, hot water heating and similar uses, whereas electricity usage emits GHGs indirectly to the extent that it is generated by burning carbon-based fuels. For the building sector to achieve carbon neutrality, natural gas usage will need to be phased out and replaced with electricity usage, and electrical generation will need to shift to 100-percent carbon-free sources. To support these shifts, new projects need to be built without natural gas and with no inefficient or wasteful energy usage.

#### ELECTRICITY

Eliminating GHG emissions associated with building electricity usage will be achieved by decarbonizing California's electrical generation infrastructure. California has committed to achieving this goal by 2045 through SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 strengthened the State's Renewables Portfolio Standard (RPS) by requiring that 60 percent of all electricity provided to retail users in California come from renewable sources by 2030 and that 100 percent come from carbon-free sources by 2045.

The land use sector will benefit from RPS because the electricity used in buildings will be increasingly carbon-free, but implementation does not depend (directly at least) on how buildings are designed and built. RPS will be implemented by the generators that produce and sell the electricity, not by the end users of that electricity. Implementing SB 100 is therefore not part of the "fair share" that falls to land use development projects to ensure that California reaches its 2045 carbon neutrality target.

Nevertheless, land use projects do have an important role to play on the demand side to ensure that SB 100 can feasibly be implemented. Inefficient electricity usage will hinder the shift to renewable power generation by requiring additional carbon-free generating resources to be developed, increasing the cost of shifting to renewables and other carbon-free energy sources, and delaying full implementation longer than necessary. Thus, to the extent that new land use projects have a role to play in ensuring that SB 100 is successfully implemented, that role is to maximize the efficiency with which they use electricity and to eliminate any wasteful or unnecessary usage. If a new land use project maximizes efficiency and eliminates wasteful and unnecessary usage, then it will implement its "fair share" in this area, consistent with achieving the State's long-term climate goals. Conversely, if a project is not designed to use electricity in an efficient manner, then it will hinder the successful implementation of SB 100 and the State's long-term climate goals.

CEQA requires lead agencies to evaluate a project's potential for wasteful, inefficient, or unnecessary energy usage under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines, along with State CEQA Guidelines Appendix F and Appendix G, Section VI. The Air District recommends using the results of this analysis to determine whether the project will implement its "fair share" with respect to supporting the implementation of SB 100. If the energy analysis required under CEQA Section 21100(b)(3) shows that a project will not result in any wasteful, inefficient, or unnecessary electrical usage, then it will

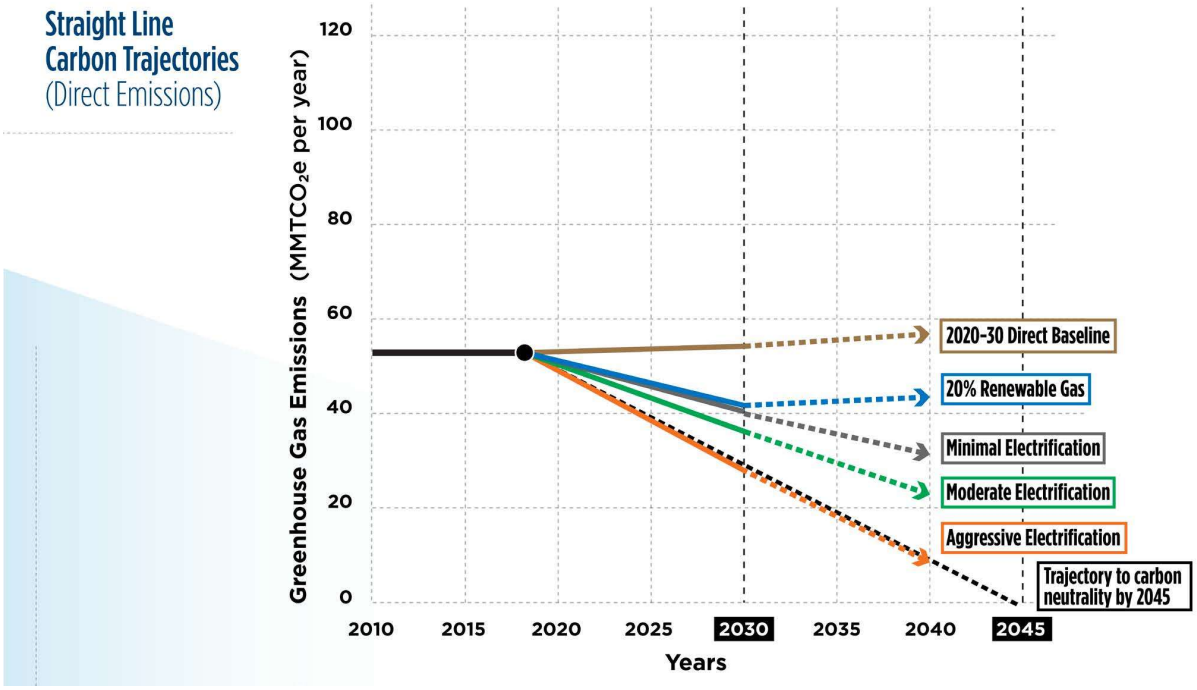
be consistent with implementing SB 100 and will not make a cumulatively considerable climate impact with respect to building electrical usage. If the project is found to involve wasteful, inefficient, or unnecessary electrical usage, then the lead agency should conclude that it will make a cumulatively considerable impact and treat it as significant in this regard.

## NATURAL GAS

Regarding natural gas usage, new land use development projects must be built without any natural gas infrastructure in order to be consistent with achieving the 2045 carbon neutrality goal. There is no practical way to eliminate the GHG emissions that are generated by burning natural gas, so the land use sector will need to fully eliminate natural gas usage in buildings in order to achieve the goal of carbon neutrality. Given the difficulty of retrofitting existing buildings to replace the use of natural gas with the use of electricity, California needs to stop building natural gas infrastructure in new buildings if it is going to be able to achieve full electrification by the 2045 target date. Retrofitting an existing building to replace natural gas infrastructure with electrical service is far more difficult and expensive than simply building a new all-electric building (CEC 2021a; E3 2019). For California to successfully eliminate natural gas usage by 2045, it will need to focus available resources on retrofitting existing natural gas infrastructure. This task will become virtually impossible if we continue to build more natural gas infrastructure that will also need to be retrofit within the next few years.

This need to eliminate natural gas in new projects in order to achieve carbon neutrality in buildings by 2045 is demonstrated by analyses conducted by the California Energy Commission (CEC) in its California Building Decarbonization Assessment (CEC 2021a). CEC published the California Building Decarbonization Assessment primarily in response to the requirements of AB 3232, which required CEC to evaluate how the State can reduce GHG emissions from its residential and commercial building stock by at least 40 percent below 1990 levels by 2030. But CEC went beyond just analyzing that 2030 goal and evaluated what will be necessary to achieve the longer-term goal of carbon neutrality by 2045. The analysis considered a number of different scenarios and projected the total GHG emissions from residential and commercial buildings under each of them. The results of CEC's analysis are shown graphically in Figure 1.

Figure 1 Effectiveness of CEC-Modeled Electrification Scenarios at Achieving Carbon Neutrality by 2045




Source: CEC 2021a:14

The CEC's analysis shows that only the most aggressive electrification scenario will put the building sector on track to reach carbon neutrality by 2045. Anything that hinders such aggressive efforts will jeopardize California's chances of achieving full building decarbonization by 2045 and impair the state's ability to reach its long-term climate goals. Installing natural gas infrastructure in new buildings will do so because it will add even more infrastructure that will need to be retrofit with electricity between now and 2045. New projects therefore need to eliminate natural gas in order to implement their "fair share" of achieving the long-term 2045 carbon neutrality goal. If a project does not use natural gas in its buildings, then a lead agency can conclude that it is consistent with achieving the 2045 carbon neutrality goal and will not have a cumulatively considerable impact on climate change. If a project does use natural gas, then it will hinder California's ability to decarbonize its building sector. In that case, the lead agency should conclude that it will make a cumulatively considerable impact and treat it as significant.

### 4.3.2 Transportation

The second principal source of GHG emissions associated with land use comes from transportation. Decarbonization of the transportation infrastructure serving land use development will come from shifting the motor vehicle fleet to EVs, coupled with a shift to carbon-free electricity to power those vehicles. Land use projects cannot directly control whether and how fast these shifts are implemented, but they can and do have an important indirect influence on California's transition to a zero-carbon transportation system.

New land use development can influence transportation-related emissions in two areas related to how it is designed and built. First, new land use projects need to provide sufficient EV charging infrastructure to serve the needs of project users who will be driving EVs. If project users cannot find the charging

infrastructure they need to charge their vehicles at the residential, commercial, and other buildings they frequent, they will be discouraged from switching to an EV. But if those buildings provide sufficient charging infrastructure to make driving an EV easy and efficient, then users will find it easy to choose to drive an EV, and the rate of EV penetration will be accelerated. It is therefore very important for land use projects to provide the EV charging infrastructure needed to support growing EV usage.

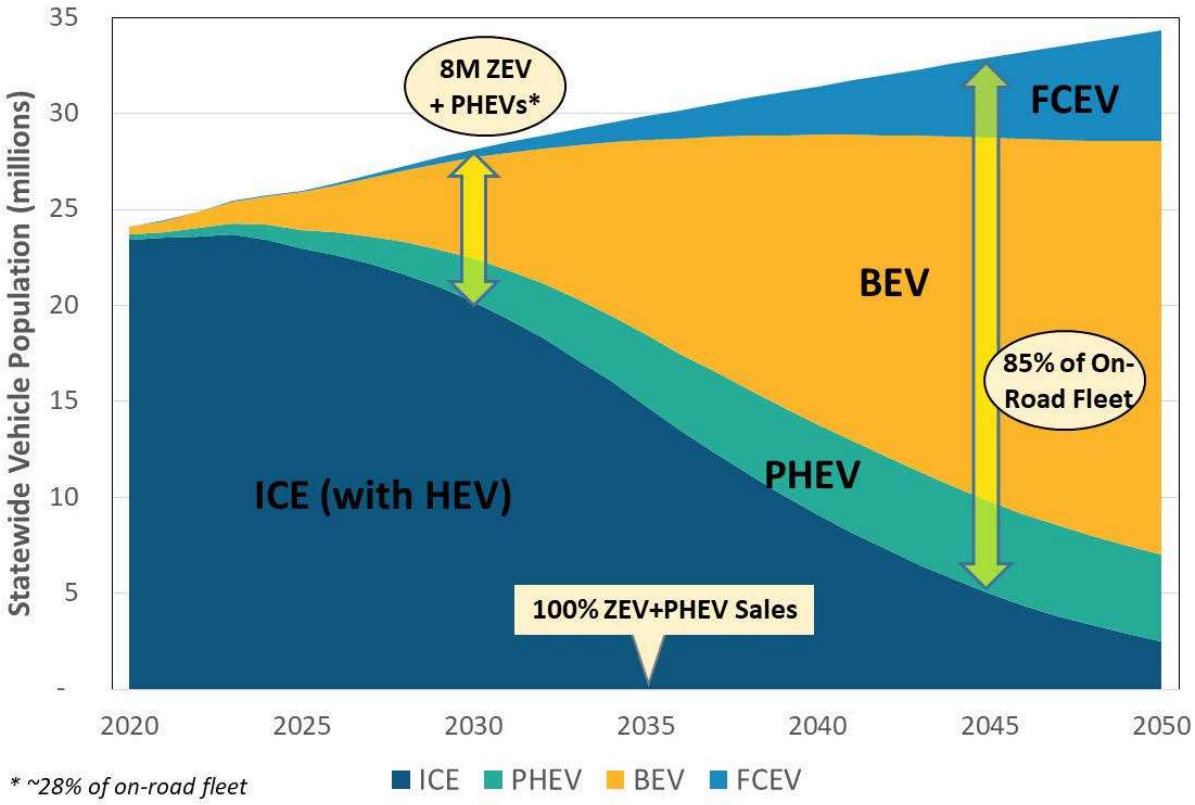
Second, new land use projects can influence transportation-related GHG emissions by reducing the amount of VMT associated with the project. Motor vehicle transportation does not need to be eliminated entirely in order for the land use sector to achieve carbon neutrality, as carbon-free vehicle technology can be used (e.g., EVs powered by carbon-free electricity sources). But for that goal to be realistically implemented by 2045, California will need to reduce its per-capita VMT. How land use development is designed and sited can have a significant influence on how much VMT the project will generate. New land use projects need to provide alternatives to motor vehicle–based transportation such that VMT per capita can be reduced to levels consistent with achieving carbon neutrality by 2045.

The design elements that new land use projects need to incorporate to address these two areas are outlined below.

## EV CHARGING INFRASTRUCTURE

To implement the decarbonization of California's motor vehicle transportation, the California Air Resources Board (CARB) has adopted a comprehensive Mobile Source Strategy incorporating a suite of policies to promote the shift away from fossil fuel–powered vehicles (CARB 2021b). These policies include aggressive targets for EV penetration, including Executive Order B-16-12's goal of 1.5 million zero-emission vehicles (ZEVs) on the road by 2025 and Executive Order N-79-20's call for all new light-duty vehicles sold in California to be battery electric or plug-in hybrid by 2035. CARB's modeling projects that these efforts will result in as many as 8 million light-duty EVs in the statewide fleet by 2030 and that 85 percent of the on-road fleet will be EVs by 2045 (CARB 2021b:94–95). The results of CARB's modeling for its 2020 Mobile Source Strategy scenario are shown in Figure 2, below.

Figure 2 Statewide Light-Duty Vehicle Technology Penetration in the On-Road Fleet




Source: CARB 2021b

Notes: BEV = battery electric vehicle; FCEV = fuel cell electric vehicle; HEV = hybrid electric vehicle; ICE = internal combustion engine vehicle; PHEV = plug-in electric vehicle; ZEV = zero emission vehicle.

Implementing this widespread shift to EVs will require the installation of extensive EV charging infrastructure, and new development will need to provide its "fair share" of that infrastructure. Indeed, new development has an especially important role to play, as installing EV charging infrastructure in new buildings is far less expensive than retrofitting existing buildings. CARB has found that installing EV charging infrastructure in a new building can save an estimated $7,000–$8,000 per parking space compared with retrofitting it later (CARB 2019a:19).

The requirements for EV charging infrastructure in new land use development projects are governed by the CALGreen regulatory standards. These standards are set forth in Title 24 of the California Code of Regulations, and they are regularly updated on a 3-year cycle. The CALGreen standards consist of a set of mandatory standards that are legally required for new development, as well as two more aggressive sets of voluntary standards known as Tier 1 and Tier 2. Although the Tier 1 and Tier 2 standards are voluntary, they often form the basis of future mandatory standards adopted in subsequent updates.

The CalGreen standards have recently been updated (2022 version) and will be in effect from January 1, 2023, through December 31, 2025. The 2022 CALGreen standards seek to deploy additional EV chargers in various building types, including multifamily residential and nonresidential land uses. They include requirements for both EV capable parking spaces and the installation of Level 2 EV supply equipment for multifamily residential and nonresidential buildings. The 2022 CALGreen standards go beyond previous

iterations and include requirements for both EV readiness and the actual installation of EV chargers. As with previous iterations, the 2022 CALGreen standards include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions.

The 2022 CALGreen mandatory standards were adopted based on what will be required to serve anticipated EV charging demand through the year 2025. CARB evaluated what will be required to serve demand through 2025 as part of its role in ensuring that the CALGreen standards support California's long-range climate goals pursuant to AB 341 (Health and Safety Code Section 18930.5[b]). CARB suggested a number of necessary revisions for the 2022 iteration of the standards, including an increase in the percent of parking spaces in certain types of projects that must be EV-capable from the earlier 6 percent to the current 10 percent. These revisions were based on CARB's assessment of the level of EV infrastructure that will be required to support the Executive Order B-16-12 target of 1.5 million ZEVs on the road by 2025. CARB conducted this analysis in 2019 using the Electric Vehicle Infrastructure Projection model (EVI-Pro) developed by the National Renewable Energy Laboratory and the California Energy Commission. Using EVI-Pro, CARB projected the amount of EV charging infrastructure required by 2025 and then calculated the amount of infrastructure expected by 2025 under existing mandatory codes and standards. The results of this analysis showed a gap between what would be achieved under existing codes and standards and what will be needed as of 2025 (CARB 2019a). The revised 2022 CALGreen mandatory standards adopted for the current 2023–2025 cycle are intended to close this gap and ensure that the charging infrastructure needs of 2025 will be met.

However, providing EV charging infrastructure to meet expected demand as of 2025 will not be sufficient to support the much more extensive level of EV penetration anticipated farther into the future. As shown in Figure 2, the number of EVs on the road is projected to grow exponentially, and the demand for EV charging infrastructure will increase accordingly. If a project provides only enough infrastructure to satisfy 2025 demand, it will fall well short of what project users will need as the State progresses toward 2045. The Air District therefore recommends using the more aggressive Tier 2 CALGreen standards to evaluate whether new land use development projects will provide their "fair share" of EV charging infrastructure. This approach is also consistent with CARB's assessment that the Tier 2 standards will need to be made mandatory in CALGreen to support the exponential increase in EV adoption rates as we move past 2025 (CARB 2019a:16).

Looking toward a post-2025 horizon is also appropriate because land use development projects have a long lifetime and will be in use in future years when extensive EV penetration is projected. To be consistent with implementing California's 2045 climate goals, such projects cannot simply provide a level of infrastructure aimed at 2025 levels of EV use, as is reflected in the current CALGreen mandatory standards. A new land use development project will need to implement the more aggressive Tier 2 CALGreen standard for its impact to be less than significant in this area.

## VEHICLE MILES TRAVELED

With respect to VMT, CARB studies have shown that California will not be able to achieve its long-term climate goals if we continue our current high level of VMT per capita. The State will need to significantly reduce its VMT per capita in order to attain the goal of carbon neutrality by 2045 (CARB 2021b:105–126).

New land use projects have an important role to play in doing so, as the way a project is sited and designed can significantly affect how the people who use the project will get around. For example, project siting and design can affect whether project users will be forced into making long car trips on a regular basis or whether they will be able to take advantage of alternative transportation options for their daily travel needs. New land use projects will need to be built with reduced levels of VMT per capita in order to implement their "fair share" of what it will take to eliminate GHG emissions from the transportation sector.

CARB has developed an analytical methodology for determining the level of VMT reduction that will be necessary to achieve California's long-term GHG emissions goals. This methodology calculates the total statewide VMT that California can accommodate and still hit its emissions targets and then divides that total statewide VMT by the State's projected population as of the target year. This calculation gives the amount of VMT per capita that the State can accommodate consistent with achieving the target. CARB's methodology then compares this targeted VMT-per-capita number with current VMT per capita to establish the reduction from current baseline levels necessary in order to hit the target.

CARB developed this methodology in conjunction with the VMT-per-capita threshold that the Governor's Office of Planning and Research (OPR) adopted for evaluating transportation impacts pursuant to SB 743 (see CEQA Guidelines Section 15064.3). SB 743 required lead agencies to abandon the old "level of service" metric for evaluating a project's transportation impacts, which was based solely on the amount of delay experienced by motor vehicles. This metric was criticized for prioritizing motor vehicle transportation and disincentivizing alternative modes, such as public transit, walking, and biking. SB 743 tasked OPR with developing an alternative metric to assess transportation impacts, and it directed OPR to base its alternative metric on factors such as reducing GHG emissions and developing multimodal transportation networks (CEQA Section 21099[b][1]). OPR concluded that the VMT-per-capita metric was the most appropriate for this purpose, and it published new Guidelines Section 15064.3 in November 2017.

CARB applied its methodology in support of OPR's VMT-per-capita metric to determine the appropriate level of VMT reduction that would allow the State to attain its long-term emissions goals, looking initially to the 2050 long-term target of an 80-percent reduction in GHG emissions compared to 1990 levels (CARB 2019b). CARB found that total statewide VMT would need to be limited to 1,035 million miles driven per day in order to achieve that target, consisting of 908 million light-duty-vehicle miles and 127 million heavy-duty-vehicle miles. With the State's population projected to grow to 49 million people by 2050, this works out to a per-capita VMT of 18.51 miles per day for light-duty vehicles and 21.09 miles per day for all vehicle types combined.[6] Given current baseline per-capita VMT levels of 22.24 miles per day for light-duty vehicles and 24.61 miles per day for all vehicle types, the reductions needed to achieve the 2050 goal are 16.8 percent for light-duty vehicles and 14.3 percent for all vehicle types combined. CARB's calculations are summarized in Table 1.

[6] Statewide population projections are provided by the California Department of Finance, and VMT projections are provided by CARB's scenario planning tool, Vision (CARB 2019b:5).

**Table 1 Per-Capita VMT Reductions Necessary to Attain 2050 GHG Reduction Target**

| | Light-Duty Vehicles | All Vehicle Types |
|---|---|---|
| Baseline VMT/capita | 22.24 miles per day | 24.61 miles per day |
| 2050 VMT/capita | 18.5 miles per day | 21.09 miles per day |
| **Reduction needed** | **16.8%** | **14.3%** |

Based on this analysis (as well as other factors), OPR recommended using a 15-percent reduction in per-capita VMT as an appropriate threshold of significance for evaluating transportation impacts, as this level of VMT addresses transportation and corresponds to what would be needed to attain the State's 2050 climate target (OPR 2018).[7]

CARB is currently updating this analysis for the 2045 carbon neutrality target in connection with its 2022 Scoping Plan Update. Although that work is ongoing and CARB has not finalized its revised analysis, CARB has suggested that it will use the same 15-percent-per-capita VMT reduction threshold that it derived in connection with the 2050 target. Specifically, in October 2021, CARB updated its Mobile Source Strategy, an important constituent of the Scoping Plan, using the same 15-percent reduction target as used in previous plans (CARB 2021b:105). The Air District therefore recommends that lead agencies use OPR's 15-percent per-capita VMT reduction threshold for evaluating land use projects (OPR 2018). Alternatively, to the extent CARB determines that a different threshold would be more appropriate for purposes of the 2045 carbon neutrality target in connection with its work on the 2022 Scoping Plan Update, lead agencies should use that 2045-specific threshold instead. If a land use project is designed and built so that its associated VMT per capita is reduced to the extent determined to be necessary by CARB, then it will implement its "fair share" of the VMT reductions needed to attain the State's long-term climate goals and can be found to have a less-than-significant climate impact.

Finally, it is worth noting that some local jurisdictions may have developed their own VMT-per-capita thresholds for use in CEQA transportation analyses pursuant to SB 743. If such a jurisdiction-specific VMT-per-capita threshold is available and applicable, the Air District recommends that lead agencies use it in their climate impact analyses, provided that it was established based on what it will take to achieve California's long-term climate goals in a manner akin to the analysis outlined above. If an SB 743 transportation threshold is not established at a level commensurate with achieving those climate goals, then it would not be appropriate to use it to evaluate climate impacts. But if it is based on the level of VMT necessary for the local jurisdiction to attain climate neutrality by 2045, then a lead agency can use it to evaluate whether a project is doing its "fair share" with respect to ensuring that VMT is reduced sufficient to achieve the State's climate goals.

OPR has provided guidance to local jurisdictions on choosing appropriate local VMT reduction thresholds in its Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018). The advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. It specifies recommended thresholds of significance for residential, office, and retail projects,

[7] The 15-percent reduction is compared to existing VMT per capita measured as either regional VMT per capita or city VMT per capita (OPR 2018:15).

which are reflected in the "Thresholds for Land Use Projects" section on page 10 of this document. These types of projects reflect the vast majority of land use projects implemented in the Bay Area. For other types of projects, lead agencies should follow the guidance provided in the OPR advisory. OPR may update or supplement this advisory in the future in response to new information and advancements in modeling and methods, so lead agencies should continue to track the development of the advisory and always use the most recent version.

# 5 THRESHOLDS FOR GENERAL PLANS AND SIMILAR LONG-TERM COMMUNITY-WIDE PLANNING DOCUMENTS

Local governments are essential partners in achieving California's goal to reduce GHG emissions. Local governments not only approve specific land use development projects but have primary authority to plan for and zone how and where land is developed within their jurisdiction to accommodate population growth and the changing needs of their communities. CEQA also applies to these planning decisions, and local governments are required to evaluate the climate impacts when adopting such plans.

| Thresholds for Plans (Must Include A or B) |
|---|
| A. Meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045; or |
| B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). |

## 5.1 REDUCING GHG EMISSIONS TO MEET GHG REDUCTION TARGETS

For long-term communitywide planning documents (e.g., general plans, long-range development plans, climate action plans) to have a less-than-significant climate impact, they must demonstrate that GHG emissions from the jurisdiction will decline consistent with California's GHG reduction targets of 40 percent below 1990 levels by 2030 and carbon neutrality by 2045. A city or county that plans to develop in a manner that will cause emissions to exceed these targets will hinder the State's ability to achieve its climate goals and thus will have a significant climate impact. Conversely, a city or county that will develop in a way that will meet those targets will support the State's ability to achieve its climate goals and thus will have a less-than-significant impact on GHG emissions. Therefore, a communitywide long-term plan must demonstrate that the community will have GHG emissions 40 percent below its 1990 levels by 2030 and support the State's goal of carbon neutrality by 2045.

## 5.2 CLIMATE ACTION PLANS

The Air District encourages local jurisdictions to develop climate action plans as a means of demonstrating that their communities—including existing and new buildings and infrastructure—will develop in accordance with meeting the statewide GHG reduction targets. A robust climate action plan identifies a land use design, a transportation network, goals, policies, and implementation measures that will achieve

the required GHG emissions targets of 40 percent below 1990 levels by 2030 and support the State's goal of achieving carbon neutrality by 2045. If a jurisdiction adopts such a climate action plan, it can then use that plan when it adopts its general plan updates and similar long-range planning documents to provide the basis for demonstrating that the jurisdiction's GHG emissions will decline consistent with the State's 2030 and 2045 targets. This demonstration will allow the jurisdiction to make the required CEQA determination that its general plan and similar planning documents will not have a significant climate impact, as discussed in Section 5.1, above.

Furthermore, a robust climate action plan developed and adopted in accordance with the requirements for a "plan for the reduction of greenhouse gas emissions" set forth in CEQA Guidelines Section 15183.5 will provide additional benefits related to approving specific development projects. Guidelines Section 15183.5(b)(2) provides that if a jurisdiction has adopted a climate action plan that satisfies all of the Section 15183.5 requirements, the jurisdiction can find that a project that is consistent with the plan will not make a cumulatively considerable contribution to global climate change under CEQA. Adopting a climate action plan with requirements and implementation measures governing specific types of projects—and what those projects must do to ensure that the jurisdiction's GHG emissions achieve the required targets—can provide a great deal of certainty for project applicants and agency decision makers. A proposed project that complies with all the specified requirements and implementation measures will not be found to be significant under Guidelines Section 15183.5(b)(2). Local jurisdictions also will be able to tailor the applicable requirements and mitigation measures to their specific communities rather than rely on the Air District's general thresholds for evaluating land use projects, discussed in Section 4, above.

CEQA Guidelines Section 15183.5(b)(1) lays out the specific criteria to be included in local GHG reduction strategies that can enable CEQA streamlining benefits for future land use projects. Such plans must:

- quantify GHG emissions, both existing and projected over a specified period, resulting from activities in a defined geographic area;
- establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated in the geographic area;
- specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and
- be adopted in a public process following environmental review.

These requirements are somewhat vague in some cases, and the Air District cautions jurisdictions developing climate action plans to take care that their plans are comprehensive and fully satisfy the letter and the spirit of the Section 15183.5 process. Climate action plans that do not satisfy all of these required

elements will not be eligible for use in approving later projects under Guidelines Section 15183.5(b)(2), and they will not provide the substantial evidence necessary to demonstrate that the jurisdiction's general plan updates and related long-range planning documents will have a less-than-significant impact as outlined in Section 5.1.

The Air District has published guidance on how a jurisdiction can develop a climate action plan that satisfies the requirements of Guidelines Section 15183.5(b)(1), which is included as Appendix C to the CEQA Air Quality Guidelines document. Jurisdictions developing climate action plans should refer to and follow that guidance to strengthen their plan's ability to comply with all Section 15183.5(b)(1) requirements and allow it to be used to evaluate climate impacts under Section 15183.5(b)(2).

The Air District strongly encourages jurisdictions to adopt local GHG reduction strategies—either as a stand-alone climate action or sustainability plans or as a part of the general plan—that meet the Section 15183.5(b)(1) criteria. Adopting a robust GHG reduction strategy that satisfies these requirements can bring many benefits to the community:

- It will identify measures that the city or county will need to take to ensure that its GHG emissions will be consistent with the statewide climate protection targets, that the jurisdiction can then use to make the consistency determination for its general plan updates.
- The city or county will be able to use the Section 15183.5(b)(1)–compliant GHG reduction strategy to approve specific land use development projects that are consistent with the strategy. This will provide a method for analyzing projects under CEQA that is tailored to the specific needs and policy goals of the individual jurisdiction, and it will allow the city or county to use that tailored methodology instead of the more general thresholds approach developed by the Air District for use regionwide.
- Cities and counties can develop Section 15183.5(b)(1) GHG reduction strategies immediately, without waiting for their next general plan update cycle.

This approach to local climate planning, tied to the SB 32 and carbon neutrality goals, promotes reductions on a plan level without impeding the implementation of GHG-efficient development, and recognizes the initiative of many Bay Area communities that have already developed or are developing a GHG reduction plan. A qualified climate action plan will provide the evidentiary basis for making CEQA findings that development consistent with the plan will result in feasible, measurable, and verifiable GHG reductions consistent with broad State goals such that projects approved under the plan will achieve their "fair share" of GHG emission reductions.

# 6 REFERENCES

BAAQMD. *See* Bay Area Air Quality Management District.

Bay Area Air Quality Management District. 2021 (March). *Bay Area Electric Vehicle Acceleration Plan*. Available: https://www.baaqmd.gov/~/media/files/strategic-incentives/ev-acceleration/ev-acceleration-plan_3_2021-pdf.pdf?la=en. Accessed January 3, 2022.

BSC. *See* California Building Standards Commission.

California Air Resources Board. 2019a (November 15). EV Charging Infrastructure: Nonresidential Building Standards 2019/2020 Intervening Code Cycle: CARB Staff Technical and Cost Analysis.

———. 2019b (January). *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*.

———. 2021a. Proposed PATHWAYS Scenario Modeling Assumptions. Presented at 2022 Scoping Plan Update – Scenario Inputs Technical Workshop, September 30, 2021. Available: https://ww2.arb.ca.gov/sites/default/files/2021-09/Draft_2022SP_ScenarioAssumptions_30Sept.pdf. Accessed December 3, 2021.

———. 2021b (October 28). *2020 Mobile Source Strategy*. Available: https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf. Accessed January 3, 2022.

———. 2021c (April 1). Attachment A: CARB Submission for EV Charging Infrastructure Provisions for Nonresidential Buildings in the California Green Building Standards (CALGreen) Code.

California Building Standards Commission. 2020. 2022 CALGreen Workshop Agenda Item 3A & 3B. Workshop held on December 9, 2020.

California Department of Housing and Community Development. 2021 (March). 45-Day Initial Statement of Reasons for Proposed Building Standards of the California Department of Housing and Community Development Regarding the 2022 California Green Building Standards Code California Code of Regulations, Title 24, Part 11.

California Energy Commission. 2021a (August). *Final Commission Report: California Building Decarbonization Assessment*. Publication Number CEC-400-2021-006-CMF.

———. 2021b. California Energy Commission Zero Emission Vehicle and Charger Statistics. Data last updated October 1, 2021. Available: http://www.energy.ca.gov/zevstats. Accessed December 30, 2021.

———. 2021c (July). Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment: Analyzing Charging Needs to Support Zero-Emission Vehicles in 2030 – Commission Report. Publication Number CEC-600-2021-001-CMR.

CARB. *See* California Air Resources Board.

CEC. *See* California Energy Commission.

E3. *See* Energy and Environmental Economics.

Energy and Environmental Economics. 2019 (April). Residential Building Electrification in California. Available: www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf.

Governor's Office of Planning and Research. 2018 (December). *Technical Advisory on Evaluating Transportation Impacts in CEQA*.

HCD. *See* California Department of Housing and Community Development.

Intergovernmental Panel on Climate Change. 2018. *Global Warming of 1.5°C*. Available: https://www.ipcc.ch/sr15/.

IPCC. *See* Intergovernmental Panel on Climate Change.

Lerman, Sam. Air resources engineer. Sustainable Transportation and Communities Division, California Air Resources Board. August 25, 2021—email to Hannah Kornfeld of Ascent Environmental regarding multifamily development electric vehicle infrastructure under the Tiers 1 and 2 of the 2022 CALGreen Standards.

OPR. *See* Governor's Office of Planning and Research.

# ATTACHMENT 2

CalEEMod Output

# Road Self-Storage and RV Parking Facility Project Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Road Self-Storage and RV Parking Facility Project |
| Lead Agency | County of San Diego |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.50 |
| Precipitation (days) | 7.20 |
| Location | 32.6876510318057, -117.01484506576355 |
| County | San Diego |
| City | Unincorporated |
| Air District | San Diego County APCD |
| Air Basin | San Diego |
| TAZ | 6606 |
| EDFZ | 12 |
| Electric Utility | San Diego Gas & Electric |
| Gas Utility | San Diego Gas & Electric |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.90 | 1000sqft | 0.02 | 900 | 0.00 | — | — | — |
| Unrefrigerated Warehouse-No Rail | 133 | 1000sqft | 7.41 | 133,150 | 77,101 | — | — | — |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Parking Lot | 135 | Space | 3.30 | 0.00 | 0.00 | 0.00 | — | — |

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

| Sector | # | Measure Title |
|---|---|---|
| Transportation | T-14* | Provide Electric Vehicle Charging Infrastructure |
| Energy | E-15 | Require All-Electric Development |

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

# 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. | 4.79 | 4.02 | 40.6 | 36.4 | 0.09 | 1.81 | 19.8 | 21.6 | 1.66 | 10.1 | 11.8 | — | 9,159 | 9,159 | 0.40 | 0.43 | 5.83 | 9,304 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.83 | 33.3 | 12.9 | 16.2 | 0.03 | 0.56 | 0.62 | 1.18 | 0.52 | 0.15 | 0.67 | — | 3,489 | 3,489 | 0.15 | 0.12 | 0.10 | 3,528 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.08 | 2.64 | 8.42 | 8.85 | 0.02 | 0.36 | 1.55 | 1.91 | 0.33 | 0.64 | 0.97 | — | 1,982 | 1,982 | 0.09 | 0.07 | 0.82 | 2,007 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.20 | 0.48 | 1.54 | 1.61 | < 0.005 | 0.07 | 0.28 | 0.35 | 0.06 | 0.12 | 0.18 | — | 328 | 328 | 0.01 | 0.01 | 0.14 | 332 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exceeds (Daily Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Threshold | — | 75.0 | 250 | 550 | 250 | — | — | 100 | — | — | 55.0 | — | — | — | — | — | — | — |
| Unmit. | — | No | No | No | No | — | — | No | — | — | No | — | — | — | — | — | — | — |
| Exceeds (Average Daily) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Threshold | — | 75.0 | 250 | 550 | 250 | — | — | 100 | — | — | 55.0 | — | — | — | — | — | — | — |
| Unmit. | — | No | No | No | No | — | — | No | — | — | No | — | — | — | — | — | — | — |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 4.79 | 4.02 | 40.6 | 36.4 | 0.09 | 1.81 | 19.8 | 21.6 | 1.66 | 10.1 | 11.8 | — | 9,159 | 9,159 | 0.40 | 0.43 | 5.83 | 9,304 |
| 2024 | 1.74 | 1.46 | 12.2 | 16.2 | 0.03 | 0.51 | 0.62 | 1.12 | 0.47 | 0.15 | 0.62 | — | 3,501 | 3,501 | 0.15 | 0.12 | 3.62 | 3,543 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 1.83 | 1.52 | 12.9 | 16.2 | 0.03 | 0.56 | 0.62 | 1.18 | 0.52 | 0.15 | 0.67 | — | 3,489 | 3,489 | 0.15 | 0.12 | 0.10 | 3,528 |
| 2024 | 1.74 | 33.3 | 12.2 | 15.9 | 0.03 | 0.51 | 0.62 | 1.12 | 0.47 | 0.15 | 0.62 | — | 3,471 | 3,471 | 0.15 | 0.12 | 0.09 | 3,510 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 1.08 | 0.90 | 8.42 | 8.75 | 0.02 | 0.36 | 1.55 | 1.91 | 0.33 | 0.64 | 0.97 | — | 1,982 | 1,982 | 0.09 | 0.07 | 0.72 | 2,007 |
| 2024 | 0.96 | 2.64 | 6.75 | 8.85 | 0.01 | 0.28 | 0.33 | 0.61 | 0.26 | 0.08 | 0.34 | — | 1,885 | 1,885 | 0.08 | 0.06 | 0.82 | 1,906 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2023 | 0.20 | 0.16 | 1.54 | 1.60 | < 0.005 | 0.07 | 0.28 | 0.35 | 0.06 | 0.12 | 0.18 | — | 328 | 328 | 0.01 | 0.01 | 0.12 | 332 |
| 2024 | 0.18 | 0.48 | 1.23 | 1.61 | < 0.005 | 0.05 | 0.06 | 0.11 | 0.05 | 0.01 | 0.06 | — | 312 | 312 | 0.01 | 0.01 | 0.14 | 316 |

## 2.3. Construction Emissions by Year, Mitigated

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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 4.79 | 4.02 | 40.6 | 36.4 | 0.09 | 1.81 | 19.8 | 21.6 | 1.66 | 10.1 | 11.8 | — | 9,159 | 9,159 | 0.40 | 0.43 | 5.83 | 9,304 |
| 2024 | 1.74 | 1.46 | 12.2 | 16.2 | 0.03 | 0.51 | 0.62 | 1.12 | 0.47 | 0.15 | 0.62 | — | 3,501 | 3,501 | 0.15 | 0.12 | 3.62 | 3,543 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 1.83 | 1.52 | 12.9 | 16.2 | 0.03 | 0.56 | 0.62 | 1.18 | 0.52 | 0.15 | 0.67 | — | 3,489 | 3,489 | 0.15 | 0.12 | 0.10 | 3,528 |
| 2024 | 1.74 | 33.3 | 12.2 | 15.9 | 0.03 | 0.51 | 0.62 | 1.12 | 0.47 | 0.15 | 0.62 | — | 3,471 | 3,471 | 0.15 | 0.12 | 0.09 | 3,510 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 1.08 | 0.90 | 8.42 | 8.75 | 0.02 | 0.36 | 1.55 | 1.91 | 0.33 | 0.64 | 0.97 | — | 1,982 | 1,982 | 0.09 | 0.07 | 0.72 | 2,007 |
| 2024 | 0.96 | 2.64 | 6.75 | 8.85 | 0.01 | 0.28 | 0.33 | 0.61 | 0.26 | 0.08 | 0.34 | — | 1,885 | 1,885 | 0.08 | 0.06 | 0.82 | 1,906 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2023 | 0.20 | 0.16 | 1.54 | 1.60 | < 0.005 | 0.07 | 0.28 | 0.35 | 0.06 | 0.12 | 0.18 | — | 328 | 328 | 0.01 | 0.01 | 0.12 | 332 |
| 2024 | 0.18 | 0.48 | 1.23 | 1.61 | < 0.005 | 0.05 | 0.06 | 0.11 | 0.05 | 0.01 | 0.06 | — | 312 | 312 | 0.01 | 0.01 | 0.14 | 316 |

## 2.4. Operations Emissions Compared Against Thresholds

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.00 | 4.88 | 1.18 | 12.3 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.14 | 127 | 3,409 | 3,536 | 13.1 | 0.21 | 5.32 | 3,931 |
| Mit. | 2.00 | 4.88 | 1.18 | 12.3 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.14 | 127 | 3,409 | 3,536 | 13.1 | 0.21 | 5.32 | 3,931 |
| % Reduced | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.95 | 3.90 | 1.19 | 6.11 | 0.02 | 0.05 | 0.43 | 0.48 | 0.05 | 0.08 | 0.13 | 127 | 3,324 | 3,451 | 13.1 | 0.21 | 0.14 | 3,842 |
| Mit. | 0.95 | 3.90 | 1.19 | 6.11 | 0.02 | 0.05 | 0.43 | 0.48 | 0.05 | 0.08 | 0.13 | 127 | 3,324 | 3,451 | 13.1 | 0.21 | 0.14 | 3,842 |
| % Reduced | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.45 | 4.36 | 1.21 | 8.97 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.13 | 127 | 3,345 | 3,472 | 13.1 | 0.21 | 2.30 | 3,865 |
| Mit. | 1.45 | 4.36 | 1.21 | 8.97 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.13 | 127 | 3,345 | 3,472 | 13.1 | 0.21 | 2.30 | 3,865 |
| % Reduced | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.26 | 0.80 | 0.22 | 1.64 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.01 | 0.02 | 21.1 | 554 | 575 | 2.17 | 0.04 | 0.38 | 640 |
| Mit. | 0.26 | 0.80 | 0.22 | 1.64 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.01 | 0.02 | 21.1 | 554 | 575 | 2.17 | 0.04 | 0.38 | 640 |
| % Reduced | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Exceeds (Daily Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Threshold | — | 75.0 | 250 | 550 | 250 | — | — | 100 | — | — | 55.0 | — | — | — | — | — | — | — |
| Unmit. | — | No | No | No | No | — | — | No | — | — | No | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mit. | — | No | No | No | No | — | — | No | — | — | No | — | — | — | — | — | — | — |
| Exceeds (Average Daily) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Threshold | — | 75.0 | 250 | 550 | 250 | — | — | 100 | — | — | 55.0 | — | — | — | — | — | — | — |
| Unmit. | — | No | No | No | No | — | — | No | — | — | No | — | — | — | — | — | — | — |
| Mit. | — | No | No | No | No | — | — | No | — | — | No | — | — | — | — | — | — | — |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.91 | 0.83 | 0.60 | 5.99 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,362 | 1,362 | 0.07 | 0.05 | 5.32 | 1,385 |
| Area | 1.04 | 4.02 | 0.05 | 5.83 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |
| Energy | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,702 | 1,702 | 0.12 | 0.01 | — | 1,708 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 2.00 | 4.88 | 1.18 | 12.3 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.14 | 127 | 3,409 | 3,536 | 13.1 | 0.21 | 5.32 | 3,931 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.89 | 0.81 | 0.66 | 5.67 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,301 | 1,301 | 0.07 | 0.06 | 0.14 | 1,320 |
| Area | — | 3.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,702 | 1,702 | 0.12 | 0.01 | — | 1,708 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 0.95 | 3.90 | 1.19 | 6.11 | 0.02 | 0.05 | 0.43 | 0.48 | 0.05 | 0.08 | 0.13 | 127 | 3,324 | 3,451 | 13.1 | 0.21 | 0.14 | 3,842 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.88 | 0.80 | 0.65 | 5.65 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,311 | 1,311 | 0.07 | 0.06 | 2.30 | 1,331 |
| Area | 0.51 | 3.53 | 0.02 | 2.87 | < 0.005 | < 0.005 | — | < 0.005 | 0.01 | — | 0.01 | — | 11.8 | 11.8 | < 0.005 | < 0.005 | — | 11.9 |
| Energy | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,702 | 1,702 | 0.12 | 0.01 | — | 1,708 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 1.45 | 4.36 | 1.21 | 8.97 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.13 | 127 | 3,345 | 3,472 | 13.1 | 0.21 | 2.30 | 3,865 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.16 | 0.15 | 0.12 | 1.03 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.01 | 0.02 | — | 217 | 217 | 0.01 | 0.01 | 0.38 | 220 |
| Area | 0.09 | 0.64 | < 0.005 | 0.52 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.96 | 1.96 | < 0.005 | < 0.005 | — | 1.96 |
| Energy | 0.01 | 0.01 | 0.10 | 0.08 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 282 | 282 | 0.02 | < 0.005 | — | 283 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 9.82 | 53.1 | 62.9 | 1.01 | 0.02 | — | 95.4 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 11.2 | 0.00 | 11.2 | 1.12 | 0.00 | — | 39.3 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 0.26 | 0.80 | 0.22 | 1.64 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.01 | 0.02 | 21.1 | 554 | 575 | 2.17 | 0.04 | 0.38 | 640 |

## 2.6. Operations Emissions by Sector, Mitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.91 | 0.83 | 0.60 | 5.99 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,362 | 1,362 | 0.07 | 0.05 | 5.32 | 1,385 |
| Area | 1.04 | 4.02 | 0.05 | 5.83 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,702 | 1,702 | 0.12 | 0.01 | — | 1,708 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 2.00 | 4.88 | 1.18 | 12.3 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.14 | 127 | 3,409 | 3,536 | 13.1 | 0.21 | 5.32 | 3,931 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.89 | 0.81 | 0.66 | 5.67 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,301 | 1,301 | 0.07 | 0.06 | 0.14 | 1,320 |
| Area | — | 3.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,702 | 1,702 | 0.12 | 0.01 | — | 1,708 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 0.95 | 3.90 | 1.19 | 6.11 | 0.02 | 0.05 | 0.43 | 0.48 | 0.05 | 0.08 | 0.13 | 127 | 3,324 | 3,451 | 13.1 | 0.21 | 0.14 | 3,842 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.88 | 0.80 | 0.65 | 5.65 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,311 | 1,311 | 0.07 | 0.06 | 2.30 | 1,331 |
| Area | 0.51 | 3.53 | 0.02 | 2.87 | < 0.005 | < 0.005 | — | < 0.005 | 0.01 | — | 0.01 | — | 11.8 | 11.8 | < 0.005 | < 0.005 | — | 11.9 |
| Energy | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 1,702 | 1,702 | 0.12 | 0.01 | — | 1,708 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 1.45 | 4.36 | 1.21 | 8.97 | 0.02 | 0.06 | 0.43 | 0.49 | 0.06 | 0.08 | 0.13 | 127 | 3,345 | 3,472 | 13.1 | 0.21 | 2.30 | 3,865 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.16 | 0.15 | 0.12 | 1.03 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.01 | 0.02 | — | 217 | 217 | 0.01 | 0.01 | 0.38 | 220 |
| Area | 0.09 | 0.64 | < 0.005 | 0.52 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.96 | 1.96 | < 0.005 | < 0.005 | — | 1.96 |
| Energy | 0.01 | 0.01 | 0.10 | 0.08 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 282 | 282 | 0.02 | < 0.005 | — | 283 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 9.82 | 53.1 | 62.9 | 1.01 | 0.02 | — | 95.4 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Waste | — | — | — | — | — | — | — | — | — | — | — | 11.2 | 0.00 | 11.2 | 1.12 | 0.00 | — | 39.3 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | 0.26 | 0.80 | 0.22 | 1.64 | < 0.005 | 0.01 | 0.08 | 0.09 | 0.01 | 0.01 | 0.02 | 21.1 | 554 | 575 | 2.17 | 0.04 | 0.38 | 640 |

# 3. Construction Emissions Details

## 3.1. Site Preparation (2023) - 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 | 4.70 | 3.95 | 39.7 | 35.5 | 0.05 | 1.81 | — | 1.81 | 1.66 | — | 1.66 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 19.7 | 19.7 | — | 10.1 | 10.1 | — | — | — | — | — | — | — |
| 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 | 1.09 | 0.97 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 145 | 145 | 0.01 | < 0.005 | — | 146 |
| Dust From Material Movement | — | — | — | — | — | — | 0.54 | 0.54 | — | 0.28 | 0.28 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.20 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |
| Dust From Material Movement | — | — | — | — | — | — | 0.10 | 0.10 | — | 0.05 | 0.05 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.06 | 0.92 | 0.00 | 0.00 | 0.15 | 0.15 | 0.00 | 0.03 | 0.03 | — | 173 | 173 | 0.01 | 0.01 | 0.73 | 175 |
| 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 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.50 | 4.50 | < 0.005 | < 0.005 | 0.01 | 4.57 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.75 | 0.75 | < 0.005 | < 0.005 | < 0.005 | 0.76 |
| 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 |

## 3.2. Site Preparation (2023) - Mitigated

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 | 4.70 | 3.95 | 39.7 | 35.5 | 0.05 | 1.81 | — | 1.81 | 1.66 | — | 1.66 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 19.7 | 19.7 | — | 10.1 | 10.1 | — | — | — | — | — | — | — |
| 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 | 1.09 | 0.97 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 145 | 145 | 0.01 | < 0.005 | — | 146 |
| Dust From Material Movement | — | — | — | — | — | — | 0.54 | 0.54 | — | 0.28 | 0.28 | — | — | — | — | — | — | — |
| 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 | 0.20 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.10 | 0.10 | — | 0.05 | 0.05 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.06 | 0.92 | 0.00 | 0.00 | 0.15 | 0.15 | 0.00 | 0.03 | 0.03 | — | 173 | 173 | 0.01 | 0.01 | 0.73 | 175 |
| 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 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.50 | 4.50 | < 0.005 | < 0.005 | 0.01 | 4.57 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.75 | 0.75 | < 0.005 | < 0.005 | < 0.005 | 0.76 |
| 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 |

## 3.3. Grading (2023) - 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 | 4.43 | 3.72 | 37.3 | 31.4 | 0.06 | 1.59 | — | 1.59 | 1.47 | — | 1.47 | — | 6,598 | 6,598 | 0.27 | 0.05 | — | 6,621 |
| Dust From Material Movement | — | — | — | — | — | — | 9.22 | 9.22 | — | 3.66 | 3.66 | — | — | — | — | — | — | — |
| 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 | 0.36 | 0.31 | 3.07 | 2.58 | 0.01 | 0.13 | — | 0.13 | 0.12 | — | 0.12 | — | 542 | 542 | 0.02 | < 0.005 | — | 544 |
| Dust From Material Movement | — | — | — | — | — | — | 0.76 | 0.76 | — | 0.30 | 0.30 | — | — | — | — | — | — | — |
| 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 | 0.56 | 0.47 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 89.8 | 89.8 | < 0.005 | < 0.005 | — | 90.1 |
| Dust From Material Movement | — | — | — | — | — | — | 0.14 | 0.14 | — | 0.05 | 0.05 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.09 | 0.07 | 1.06 | 0.00 | 0.00 | 0.17 | 0.17 | 0.00 | 0.04 | 0.04 | — | 197 | 197 | 0.01 | 0.01 | 0.84 | 200 |
| 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 | 0.19 | 0.05 | 3.26 | 1.13 | 0.03 | 0.04 | 0.59 | 0.63 | 0.04 | 0.16 | 0.20 | — | 2,364 | 2,364 | 0.13 | 0.37 | 4.99 | 2,483 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 15.4 | 15.4 | < 0.005 | < 0.005 | 0.03 | 15.7 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.28 | 0.09 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 194 | 194 | 0.01 | 0.03 | 0.18 | 204 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.56 | 2.56 | < 0.005 | < 0.005 | < 0.005 | 2.59 |
| 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 | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.2 | 32.2 | < 0.005 | 0.01 | 0.03 | 33.8 |

## 3.4. Grading (2023) - Mitigated

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 | 4.43 | 3.72 | 37.3 | 31.4 | 0.06 | 1.59 | — | 1.59 | 1.47 | — | 1.47 | — | 6,598 | 6,598 | 0.27 | 0.05 | — | 6,621 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 9.22 | 9.22 | — | 3.66 | 3.66 | — | — | — | — | — | — | — |
| 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 | 0.36 | 0.31 | 3.07 | 2.58 | 0.01 | 0.13 | — | 0.13 | 0.12 | — | 0.12 | — | 542 | 542 | 0.02 | < 0.005 | — | 544 |
| Dust From Material Movement | — | — | — | — | — | — | 0.76 | 0.76 | — | 0.30 | 0.30 | — | — | — | — | — | — | — |
| 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 | 0.56 | 0.47 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 89.8 | 89.8 | < 0.005 | < 0.005 | — | 90.1 |
| Dust From Material Movement | — | — | — | — | — | — | 0.14 | 0.14 | — | 0.05 | 0.05 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.09 | 0.07 | 1.06 | 0.00 | 0.00 | 0.17 | 0.17 | 0.00 | 0.04 | 0.04 | — | 197 | 197 | 0.01 | 0.01 | 0.84 | 200 |
| 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 | 0.19 | 0.05 | 3.26 | 1.13 | 0.03 | 0.04 | 0.59 | 0.63 | 0.04 | 0.16 | 0.20 | — | 2,364 | 2,364 | 0.13 | 0.37 | 4.99 | 2,483 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 15.4 | 15.4 | < 0.005 | < 0.005 | 0.03 | 15.7 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.28 | 0.09 | < 0.005 | < 0.005 | 0.05 | 0.05 | < 0.005 | 0.01 | 0.02 | — | 194 | 194 | 0.01 | 0.03 | 0.18 | 204 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.56 | 2.56 | < 0.005 | < 0.005 | < 0.005 | 2.59 |
| 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 | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.2 | 32.2 | < 0.005 | 0.01 | 0.03 | 33.8 |

## 3.5. Building Construction (2023) - 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 | 1.50 | 1.26 | 11.8 | 13.2 | 0.02 | 0.55 | — | 0.55 | 0.51 | — | 0.51 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| 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 | 1.50 | 1.26 | 11.8 | 13.2 | 0.02 | 0.55 | — | 0.55 | 0.51 | — | 0.51 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| 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 | 0.47 | 0.39 | 3.65 | 4.07 | 0.01 | 0.17 | — | 0.17 | 0.16 | — | 0.16 | — | 741 | 741 | 0.03 | 0.01 | — | 744 |
| 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 | 0.08 | 0.07 | 0.67 | 0.74 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 123 | 123 | < 0.005 | < 0.005 | — | 123 |
| 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 | 0.28 | 0.25 | 0.21 | 2.97 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 554 | 554 | 0.03 | 0.02 | 2.35 | 563 |
| Vendor | 0.05 | 0.02 | 0.81 | 0.38 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 568 | 568 | 0.02 | 0.08 | 1.44 | 594 |
| 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 | 0.27 | 0.24 | 0.23 | 2.60 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 523 | 523 | 0.03 | 0.02 | 0.06 | 530 |
| Vendor | 0.05 | 0.02 | 0.84 | 0.39 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 568 | 568 | 0.02 | 0.08 | 0.04 | 593 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.08 | 0.07 | 0.07 | 0.81 | 0.00 | 0.00 | 0.15 | 0.15 | 0.00 | 0.03 | 0.03 | — | 163 | 163 | 0.01 | 0.01 | 0.31 | 166 |
| Vendor | 0.02 | 0.01 | 0.26 | 0.12 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 176 | 176 | 0.01 | 0.03 | 0.19 | 183 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.01 | 0.01 | 0.15 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 27.0 | 27.0 | < 0.005 | < 0.005 | 0.05 | 27.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.1 | 29.1 | < 0.005 | < 0.005 | 0.03 | 30.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.6. Building Construction (2023) - Mitigated

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 | 1.50 | 1.26 | 11.8 | 13.2 | 0.02 | 0.55 | — | 0.55 | 0.51 | — | 0.51 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| 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 | 1.50 | 1.26 | 11.8 | 13.2 | 0.02 | 0.55 | — | 0.55 | 0.51 | — | 0.51 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,406 |
| 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 | 0.47 | 0.39 | 3.65 | 4.07 | 0.01 | 0.17 | — | 0.17 | 0.16 | — | 0.16 | — | 741 | 741 | 0.03 | 0.01 | — | 744 |
| 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 | 0.08 | 0.07 | 0.67 | 0.74 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 123 | 123 | < 0.005 | < 0.005 | — | 123 |
| 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 | 0.28 | 0.25 | 0.21 | 2.97 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 554 | 554 | 0.03 | 0.02 | 2.35 | 563 |
| Vendor | 0.05 | 0.02 | 0.81 | 0.38 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 568 | 568 | 0.02 | 0.08 | 1.44 | 594 |
| 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 | 0.27 | 0.24 | 0.23 | 2.60 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 523 | 523 | 0.03 | 0.02 | 0.06 | 530 |
| Vendor | 0.05 | 0.02 | 0.84 | 0.39 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 568 | 568 | 0.02 | 0.08 | 0.04 | 593 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.08 | 0.07 | 0.07 | 0.81 | 0.00 | 0.00 | 0.15 | 0.15 | 0.00 | 0.03 | 0.03 | — | 163 | 163 | 0.01 | 0.01 | 0.31 | 166 |
| Vendor | 0.02 | 0.01 | 0.26 | 0.12 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 176 | 176 | 0.01 | 0.03 | 0.19 | 183 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.01 | 0.01 | 0.15 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 27.0 | 27.0 | < 0.005 | < 0.005 | 0.05 | 27.4 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.1 | 29.1 | < 0.005 | < 0.005 | 0.03 | 30.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 3.7. Building Construction (2024) - 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 | 1.44 | 1.20 | 11.2 | 13.1 | 0.02 | 0.50 | — | 0.50 | 0.46 | — | 0.46 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| 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 | 1.44 | 1.20 | 11.2 | 13.1 | 0.02 | 0.50 | — | 0.50 | 0.46 | — | 0.46 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| 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 | 0.74 | 0.62 | 5.75 | 6.72 | 0.01 | 0.26 | — | 0.26 | 0.23 | — | 0.23 | — | 1,229 | 1,229 | 0.05 | 0.01 | — | 1,234 |
| 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 | 0.13 | 0.11 | 1.05 | 1.23 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 204 | 204 | 0.01 | < 0.005 | — | 204 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.26 | 0.24 | 0.19 | 2.78 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 544 | 544 | 0.02 | 0.02 | 2.18 | 553 |
| Vendor | 0.05 | 0.02 | 0.77 | 0.36 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 560 | 560 | 0.02 | 0.08 | 1.44 | 585 |
| 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 | 0.25 | 0.23 | 0.21 | 2.43 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 513 | 513 | 0.03 | 0.02 | 0.06 | 520 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.05 | 0.02 | 0.80 | 0.37 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 560 | 560 | 0.02 | 0.08 | 0.04 | 584 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.13 | 0.12 | 0.11 | 1.26 | 0.00 | 0.00 | 0.24 | 0.24 | 0.00 | 0.06 | 0.06 | — | 266 | 266 | 0.01 | 0.01 | 0.48 | 269 |
| Vendor | 0.02 | 0.01 | 0.41 | 0.19 | < 0.005 | < 0.005 | 0.07 | 0.08 | < 0.005 | 0.02 | 0.02 | — | 287 | 287 | 0.01 | 0.04 | 0.32 | 300 |
| 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 | 0.23 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 44.0 | 44.0 | < 0.005 | < 0.005 | 0.08 | 44.6 |
| Vendor | < 0.005 | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 47.5 | 47.5 | < 0.005 | 0.01 | 0.05 | 49.6 |
| 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 |

## 3.8. Building Construction (2024) - Mitigated

### 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 | 1.44 | 1.20 | 11.2 | 13.1 | 0.02 | 0.50 | — | 0.50 | 0.46 | — | 0.46 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| 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 | 1.44 | 1.20 | 11.2 | 13.1 | 0.02 | 0.50 | — | 0.50 | 0.46 | — | 0.46 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| 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 | 0.74 | 0.62 | 5.75 | 6.72 | 0.01 | 0.26 | — | 0.26 | 0.23 | — | 0.23 | — | 1,229 | 1,229 | 0.05 | 0.01 | — | 1,234 |
| 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 | 0.13 | 0.11 | 1.05 | 1.23 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 204 | 204 | 0.01 | < 0.005 | — | 204 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.26 | 0.24 | 0.19 | 2.78 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 544 | 544 | 0.02 | 0.02 | 2.18 | 553 |
| Vendor | 0.05 | 0.02 | 0.77 | 0.36 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 560 | 560 | 0.02 | 0.08 | 1.44 | 585 |
| 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 | 0.25 | 0.23 | 0.21 | 2.43 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.11 | 0.11 | — | 513 | 513 | 0.03 | 0.02 | 0.06 | 520 |
| Vendor | 0.05 | 0.02 | 0.80 | 0.37 | < 0.005 | 0.01 | 0.14 | 0.15 | 0.01 | 0.04 | 0.05 | — | 560 | 560 | 0.02 | 0.08 | 0.04 | 584 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.13 | 0.12 | 0.11 | 1.26 | 0.00 | 0.00 | 0.24 | 0.24 | 0.00 | 0.06 | 0.06 | — | 266 | 266 | 0.01 | 0.01 | 0.48 | 269 |
| Vendor | 0.02 | 0.01 | 0.41 | 0.19 | < 0.005 | < 0.005 | 0.07 | 0.08 | < 0.005 | 0.02 | 0.02 | — | 287 | 287 | 0.01 | 0.04 | 0.32 | 300 |
| 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 | 0.23 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 44.0 | 44.0 | < 0.005 | < 0.005 | 0.08 | 44.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 47.5 | 47.5 | < 0.005 | 0.01 | 0.05 | 49.6 |
| 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. Paving (2024) - 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 | 1.01 | 0.85 | 7.81 | 10.0 | 0.01 | 0.39 | — | 0.39 | 0.36 | — | 0.36 | — | 1,512 | 1,512 | 0.06 | 0.01 | — | 1,517 |
| Paving | — | 0.43 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.01 | 0.85 | 7.81 | 10.0 | 0.01 | 0.39 | — | 0.39 | 0.36 | — | 0.36 | — | 1,512 | 1,512 | 0.06 | 0.01 | — | 1,517 |
| Paving | — | 0.43 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.05 | 0.43 | 0.55 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 82.8 | 82.8 | < 0.005 | < 0.005 | — | 83.1 |
| Paving | — | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.01 | 0.01 | 0.08 | 0.10 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 13.7 | 13.7 | < 0.005 | < 0.005 | — | 13.8 |
| Paving | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 0.74 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 145 | 145 | 0.01 | 0.01 | 0.58 | 147 |
| 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 | 0.07 | 0.06 | 0.06 | 0.65 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 137 | 137 | 0.01 | 0.01 | 0.02 | 139 |
| 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 | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 7.58 | 7.58 | < 0.005 | < 0.005 | 0.01 | 7.69 |
| 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 | — | 1.25 | 1.25 | < 0.005 | < 0.005 | < 0.005 | 1.27 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 |

## 3.10. Paving (2024) - Mitigated

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 | 1.01 | 0.85 | 7.81 | 10.0 | 0.01 | 0.39 | — | 0.39 | 0.36 | — | 0.36 | — | 1,512 | 1,512 | 0.06 | 0.01 | — | 1,517 |
| Paving | — | 0.43 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.01 | 0.85 | 7.81 | 10.0 | 0.01 | 0.39 | — | 0.39 | 0.36 | — | 0.36 | — | 1,512 | 1,512 | 0.06 | 0.01 | — | 1,517 |
| Paving | — | 0.43 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.05 | 0.43 | 0.55 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 82.8 | 82.8 | < 0.005 | < 0.005 | — | 83.1 |
| Paving | — | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.08 | 0.10 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 13.7 | 13.7 | < 0.005 | < 0.005 | — | 13.8 |
| Paving | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.05 | 0.74 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 145 | 145 | 0.01 | 0.01 | 0.58 | 147 |
| 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 | 0.07 | 0.06 | 0.06 | 0.65 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 137 | 137 | 0.01 | 0.01 | 0.02 | 139 |
| 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 | < 0.005 | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 7.58 | 7.58 | < 0.005 | < 0.005 | 0.01 | 7.69 |
| 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 | — | 1.25 | 1.25 | < 0.005 | < 0.005 | < 0.005 | 1.27 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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 |

## 3.11. Architectural Coating (2024) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.14 | 0.91 | 1.15 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 33.1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.05 | 0.06 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.32 | 7.32 | < 0.005 | < 0.005 | — | 7.34 |
| Architectural Coatings | — | 1.81 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.21 | 1.21 | < 0.005 | < 0.005 | — | 1.22 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.49 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 103 | 103 | 0.01 | < 0.005 | 0.01 | 104 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 5.68 | 5.68 | < 0.005 | < 0.005 | 0.01 | 5.76 |
| 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 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.94 | 0.94 | < 0.005 | < 0.005 | < 0.005 | 0.95 |
| 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 |

## 3.12. Architectural Coating (2024) - Mitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 0.14 | 0.91 | 1.15 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | — | 33.1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.05 | 0.06 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.32 | 7.32 | < 0.005 | < 0.005 | — | 7.34 |
| Architectural Coatings | — | 1.81 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.21 | 1.21 | < 0.005 | < 0.005 | — | 1.22 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.49 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 103 | 103 | 0.01 | < 0.005 | 0.01 | 104 |
| 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 | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 5.68 | 5.68 | < 0.005 | < 0.005 | 0.01 | 5.76 |
| 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 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.94 | 0.94 | < 0.005 | < 0.005 | < 0.005 | 0.95 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 0.91 | 0.83 | 0.60 | 5.99 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,362 | 1,362 | 0.07 | 0.05 | 5.32 | 1,385 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.91 | 0.83 | 0.60 | 5.99 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,362 | 1,362 | 0.07 | 0.05 | 5.32 | 1,385 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehou Rail | 0.89 | 0.81 | 0.66 | 5.67 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,301 | 1,301 | 0.07 | 0.06 | 0.14 | 1,320 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.89 | 0.81 | 0.66 | 5.67 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,301 | 1,301 | 0.07 | 0.06 | 0.14 | 1,320 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehou se-No Rail | 0.16 | 0.15 | 0.12 | 1.03 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.01 | 0.02 | — | 217 | 217 | 0.01 | 0.01 | 0.38 | 220 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.16 | 0.15 | 0.12 | 1.03 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.01 | 0.02 | — | 217 | 217 | 0.01 | 0.01 | 0.38 | 220 |

### 4.1.2. Mitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehou se-No Rail | 0.91 | 0.83 | 0.60 | 5.99 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,362 | 1,362 | 0.07 | 0.05 | 5.32 | 1,385 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.91 | 0.83 | 0.60 | 5.99 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,362 | 1,362 | 0.07 | 0.05 | 5.32 | 1,385 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 0.89 | 0.81 | 0.66 | 5.67 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,301 | 1,301 | 0.07 | 0.06 | 0.14 | 1,320 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.89 | 0.81 | 0.66 | 5.67 | 0.01 | 0.01 | 0.43 | 0.44 | 0.01 | 0.08 | 0.09 | — | 1,301 | 1,301 | 0.07 | 0.06 | 0.14 | 1,320 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 0.16 | 0.15 | 0.12 | 1.03 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.01 | 0.02 | — | 217 | 217 | 0.01 | 0.01 | 0.38 | 220 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.16 | 0.15 | 0.12 | 1.03 | < 0.005 | < 0.005 | 0.08 | 0.08 | < 0.005 | 0.01 | 0.02 | — | 217 | 217 | 0.01 | 0.01 | 0.38 | 220 |

## 4.2. Energy

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

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | 22.1 | 22.1 | < 0.005 | < 0.005 | — | 22.2 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 859 | 859 | 0.05 | 0.01 | — | 862 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 186 | 186 | 0.01 | < 0.005 | — | 187 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,067 | 1,067 | 0.07 | 0.01 | — | 1,071 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | 22.1 | 22.1 | < 0.005 | < 0.005 | — | 22.2 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 859 | 859 | 0.05 | 0.01 | — | 862 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 186 | 186 | 0.01 | < 0.005 | — | 187 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,067 | 1,067 | 0.07 | 0.01 | — | 1,071 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | 3.66 | 3.66 | < 0.005 | < 0.005 | — | 3.67 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehou Rail | — | — | — | — | — | — | — | — | — | — | — | — | 142 | 142 | 0.01 | < 0.005 | — | 143 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 30.8 | 30.8 | < 0.005 | < 0.005 | — | 31.0 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 177 | 177 | 0.01 | < 0.005 | — | 177 |

### 4.2.2. Electricity Emissions By Land Use - Mitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | 22.1 | 22.1 | < 0.005 | < 0.005 | — | 22.2 |
| Unrefrigerated Warehou se-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 859 | 859 | 0.05 | 0.01 | — | 862 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 186 | 186 | 0.01 | < 0.005 | — | 187 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,067 | 1,067 | 0.07 | 0.01 | — | 1,071 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | 22.1 | 22.1 | < 0.005 | < 0.005 | — | 22.2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No | — | — | — | — | — | — | — | — | — | — | — | — | 859 | 859 | 0.05 | 0.01 | — | 862 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 186 | 186 | 0.01 | < 0.005 | — | 187 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1,067 | 1,067 | 0.07 | 0.01 | — | 1,071 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | 3.66 | 3.66 | < 0.005 | < 0.005 | — | 3.67 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | — | 142 | 142 | 0.01 | < 0.005 | — | 143 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 30.8 | 30.8 | < 0.005 | < 0.005 | — | 31.0 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 177 | 177 | 0.01 | < 0.005 | — | 177 |

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

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.24 | 9.24 | < 0.005 | < 0.005 | — | 9.26 |
| Unrefrigerated Warehouse-No Rail | 0.06 | 0.03 | 0.52 | 0.44 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 626 | 626 | 0.06 | < 0.005 | — | 628 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 635 | 635 | 0.06 | < 0.005 | — | 637 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.24 | 9.24 | < 0.005 | < 0.005 | — | 9.26 |
| Unrefrigerated Warehouse-No Rail | 0.06 | 0.03 | 0.52 | 0.44 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 626 | 626 | 0.06 | < 0.005 | — | 628 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 635 | 635 | 0.06 | < 0.005 | — | 637 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.53 | 1.53 | < 0.005 | < 0.005 | — | 1.53 |
| Unrefrigerated Warehouse-No Rail | 0.01 | 0.01 | 0.10 | 0.08 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 104 | 104 | 0.01 | < 0.005 | — | 104 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.01 | 0.01 | 0.10 | 0.08 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 105 | 105 | 0.01 | < 0.005 | — | 105 |

### 4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.24 | 9.24 | < 0.005 | < 0.005 | — | 9.26 |
| Unrefrigerated Warehouse-No Rail | 0.06 | 0.03 | 0.52 | 0.44 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 626 | 626 | 0.06 | < 0.005 | — | 628 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 635 | 635 | 0.06 | < 0.005 | — | 637 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.24 | 9.24 | < 0.005 | < 0.005 | — | 9.26 |
| Unrefrigerated Warehouse-No Rail | 0.06 | 0.03 | 0.52 | 0.44 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 626 | 626 | 0.06 | < 0.005 | — | 628 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.06 | 0.03 | 0.53 | 0.45 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 635 | 635 | 0.06 | < 0.005 | — | 637 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.53 | 1.53 | < 0.005 | < 0.005 | — | 1.53 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unrefrigerated Warehouse-No Rail | 0.01 | 0.01 | 0.10 | 0.08 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 104 | 104 | 0.01 | < 0.005 | — | 104 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | 0.01 | 0.01 | 0.10 | 0.08 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 105 | 105 | 0.01 | < 0.005 | — | 105 |

## 4.3. Area Emissions by Source

### 4.3.2. 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 | — | 2.88 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.18 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 1.04 | 0.96 | 0.05 | 5.83 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |
| Total | 1.04 | 4.02 | 0.05 | 5.83 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 2.88 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | — | 0.18 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 3.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.53 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.03 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.09 | 0.09 | < 0.005 | 0.52 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.96 | 1.96 | < 0.005 | < 0.005 | — | 1.96 |
| Total | 0.09 | 0.64 | < 0.005 | 0.52 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.96 | 1.96 | < 0.005 | < 0.005 | — | 1.96 |

### 4.3.1. Mitigated

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 | — | 2.88 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.18 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 1.04 | 0.96 | 0.05 | 5.83 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |
| Total | 1.04 | 4.02 | 0.05 | 5.83 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | — | 24.1 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 2.88 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.18 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 3.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.53 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.03 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.09 | 0.09 | < 0.005 | 0.52 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.96 | 1.96 | < 0.005 | < 0.005 | — | 1.96 |
| Total | 0.09 | 0.64 | < 0.005 | 0.52 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.96 | 1.96 | < 0.005 | < 0.005 | — | 1.96 |

## 4.4. Water Emissions by Land Use

### 4.4.2. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.31 | 1.61 | 1.92 | 0.03 | < 0.005 | — | 2.93 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 59.0 | 319 | 378 | 6.07 | 0.15 | — | 573 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.31 | 1.61 | 1.92 | 0.03 | < 0.005 | — | 2.93 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 59.0 | 319 | 378 | 6.07 | 0.15 | — | 573 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.05 | 0.27 | 0.32 | 0.01 | < 0.005 | — | 0.49 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 9.77 | 52.8 | 62.6 | 1.00 | 0.02 | — | 94.9 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | 9.82 | 53.1 | 62.9 | 1.01 | 0.02 | — | 95.4 |

### 4.4.1. Mitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.31 | 1.61 | 1.92 | 0.03 | < 0.005 | — | 2.93 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 59.0 | 319 | 378 | 6.07 | 0.15 | — | 573 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.31 | 1.61 | 1.92 | 0.03 | < 0.005 | — | 2.93 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 59.0 | 319 | 378 | 6.07 | 0.15 | — | 573 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 59.3 | 321 | 380 | 6.10 | 0.15 | — | 576 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.05 | 0.27 | 0.32 | 0.01 | < 0.005 | — | 0.49 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 9.77 | 52.8 | 62.6 | 1.00 | 0.02 | — | 94.9 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 9.82 | 53.1 | 62.9 | 1.01 | 0.02 | — | 95.4 |

## 4.5. Waste Emissions by Land Use

### 4.5.2. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 0.00 | 0.45 | 0.05 | 0.00 | — | 1.58 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 67.5 | 0.00 | 67.5 | 6.74 | 0.00 | — | 236 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 0.00 | 0.45 | 0.05 | 0.00 | — | 1.58 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 67.5 | 0.00 | 67.5 | 6.74 | 0.00 | — | 236 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.07 | 0.00 | 0.07 | 0.01 | 0.00 | — | 0.26 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 11.2 | 0.00 | 11.2 | 1.12 | 0.00 | — | 39.1 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 11.2 | 0.00 | 11.2 | 1.12 | 0.00 | — | 39.3 |

### 4.5.1. Mitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 0.00 | 0.45 | 0.05 | 0.00 | — | 1.58 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 67.5 | 0.00 | 67.5 | 6.74 | 0.00 | — | 236 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 0.00 | 0.45 | 0.05 | 0.00 | — | 1.58 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 67.5 | 0.00 | 67.5 | 6.74 | 0.00 | — | 236 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 67.9 | 0.00 | 67.9 | 6.79 | 0.00 | — | 238 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | 0.07 | 0.00 | 0.07 | 0.01 | 0.00 | — | 0.26 |
| Unrefrigerated Warehouse-No Rail | — | — | — | — | — | — | — | — | — | — | — | 11.2 | 0.00 | 11.2 | 1.12 | 0.00 | — | 39.1 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | 11.2 | 0.00 | 11.2 | 1.12 | 0.00 | — | 39.3 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |

### 4.6.2. Mitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Office Building | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | < 0.005 | < 0.005 |

## 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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.7.2. Mitigated

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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.8.2. Mitigated

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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.9.2. Mitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

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

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

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

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

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

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

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

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Site Preparation | Site Preparation | 6/01/2023 | 6/14/2023 | 5.00 | 10.0 | — |
| Grading | Grading | 6/15/2023 | 7/26/2023 | 5.00 | 30.0 | — |
| Building Construction | Building Construction | 7/27/2023 | 9/18/2024 | 5.00 | 300 | — |
| Paving | Paving | 9/19/2024 | 10/16/2024 | 5.00 | 20.0 | — |
| Architectural Coating | Architectural Coating | 10/17/2024 | 11/13/2024 | 5.00 | 20.0 | — |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Grading | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 7.00 | 367 | 0.29 |
| 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 | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 7.00 | 84.0 | 0.37 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| 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 | 6.00 | 37.0 | 0.48 |

### 5.2.2. Mitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Excavators | Diesel | Average | 2.00 | 8.00 | 36.0 | 0.38 |
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Grading | Scrapers | Diesel | Average | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 7.00 | 367 | 0.29 |
| 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 | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 7.00 | 84.0 | 0.37 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| 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 | 6.00 | 37.0 | 0.48 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 12.0 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 7.63 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 12.0 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 7.63 | HHDT,MHDT |
| Grading | Hauling | 31.7 | 20.0 | HHDT |

| | | | | |
|---|---|---|---|---|
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 56.2 | 12.0 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 22.0 | 7.63 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 12.0 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 7.63 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 11.2 | 12.0 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 7.63 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |

### 5.3.2. Mitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 12.0 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 7.63 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 20.0 | 12.0 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 7.63 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Grading | Hauling | 31.7 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 56.2 | 12.0 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 22.0 | 7.63 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 12.0 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 7.63 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 11.2 | 12.0 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 7.63 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 0.00 | 0.00 | 201,075 | 67,025 | 8,625 |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Site Preparation | 0.00 | 0.00 | 12.0 | 0.00 | — |
| Grading | 0.00 | 7,600 | 72.0 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 3.30 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Office Building | 0.00 | 0% |
| Unrefrigerated Warehouse-No Rail | 0.00 | 0% |
| Parking Lot | 3.30 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2023 | 0.00 | 540 | 0.03 | < 0.005 |
| 2024 | 0.00 | 540 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 190 | 190 | 190 | 69,498 | 1,572 | 1,572 | 1,572 | 573,762 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.9.2. Mitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Office Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 190 | 190 | 190 | 69,498 | 1,572 | 1,572 | 1,572 | 573,762 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

#### 5.10.1.2. Mitigated

### 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 | 201,075 | 67,025 | 8,625 |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |

| | | |
|---|---|---|
| Summer Days | day/yr | 180 |

### 5.10.4. Landscape Equipment - Mitigated

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Office Building | 14,935 | 540 | 0.0330 | 0.0040 | 28,821 |
| Unrefrigerated Warehouse-No Rail | 580,528 | 540 | 0.0330 | 0.0040 | 1,952,928 |
| Parking Lot | 125,923 | 540 | 0.0330 | 0.0040 | 0.00 |

### 5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Office Building | 14,935 | 540 | 0.0330 | 0.0040 | 28,821 |
| Unrefrigerated Warehouse-No Rail | 580,528 | 540 | 0.0330 | 0.0040 | 1,952,928 |
| Parking Lot | 125,923 | 540 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Office Building | 159,960 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 30,790,938 | 1,152,210 |
| Parking Lot | 0.00 | 0.00 |

### 5.12.2. Mitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Office Building | 159,960 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 30,790,938 | 1,152,210 |
| Parking Lot | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Office Building | 0.84 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 125 | 0.00 |
| Parking Lot | 0.00 | 0.00 |

### 5.13.2. Mitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Office Building | 0.84 | 0.00 |
| Unrefrigerated Warehouse-No Rail | 125 | 0.00 |
| Parking Lot | 0.00 | 0.00 |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Office Building | Household refrigerators and/or freezers | R-134a | 1,430 | 0.02 | 0.60 | 0.00 | 1.00 |
| General Office Building | Other commercial A/C and heat pumps | R-410A | 2,088 | < 0.005 | 4.00 | 4.00 | 18.0 |

### 5.14.2. Mitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Office Building | Household refrigerators and/or freezers | R-134a | 1,430 | 0.02 | 0.60 | 0.00 | 1.00 |
| General Office Building | Other commercial A/C and heat pumps | R-410A | 2,088 | < 0.005 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

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

### 5.15.2. Mitigated

| 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 |
|---|---|---|---|

#### 5.18.1.2. Mitigated

| 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 |
|---|---|---|

#### 5.18.1.2. Mitigated

| 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) |
|---|---|---|---|

#### 5.18.2.2. Mitigated

| 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 | 9.88 | annual days of extreme heat |
| Extreme Precipitation | 2.95 | annual days with precipitation above 20 mm |
| Sea Level Rise | 0.00 | meters of inundation depth |
| Wildfire | 1.23 | 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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 0 | 0 | N/A |
| Wildfire | 1 | 0 | 0 | N/A |
| Flooding | 0 | 0 | 0 | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

| Climate Hazard | Exposure Score | Sensitivity Score | Adaptive Capacity Score | Vulnerability Score |
|---|---|---|---|---|
| Temperature and Extreme Heat | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | 1 | 1 | 1 | 2 |
| Wildfire | 1 | 1 | 1 | 2 |
| Flooding | 1 | 1 | 1 | 2 |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | N/A |

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

### 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

| Indicator | Result for Project Census Tract |
|---|---|
| Exposure Indicators | — |
| AQ-Ozone | 40.0 |
| AQ-PM | 52.2 |
| AQ-DPM | 13.6 |
| Drinking Water | 49.4 |
| Lead Risk Housing | 10.8 |
| Pesticides | 0.00 |
| Toxic Releases | 45.5 |
| Traffic | 29.3 |
| Effect Indicators | — |
| CleanUp Sites | 0.00 |
| Groundwater | 0.00 |
| Haz Waste Facilities/Generators | 29.2 |
| Impaired Water Bodies | 77.3 |
| Solid Waste | 35.7 |
| Sensitive Population | — |
| Asthma | 8.24 |
| Cardio-vascular | 6.37 |

| | |
|---|---|
| Low Birth Weights | 38.2 |
| Socioeconomic Factor Indicators | — |
| Education | 28.1 |
| Housing | 19.8 |
| Linguistic | — |
| Poverty | 22.5 |
| Unemployment | 47.0 |

## 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 | 96.12472732 |
| Employed | 87.75824458 |
| Median HI | 91.13306814 |
| Education | — |
| Bachelor's or higher | 72.26998588 |
| High school enrollment | 100 |
| Preschool enrollment | 54.67727448 |
| Transportation | — |
| Auto Access | 97.84421917 |
| Active commuting | 8.969588092 |
| Social | — |
| 2-parent households | 88.81047094 |
| Voting | 80.97010137 |
| Neighborhood | — |
| Alcohol availability | 93.21185679 |

| | |
|---|---|
| Park access | 81.35506224 |
| Retail density | 13.8842551 |
| Supermarket access | 7.532400873 |
| Tree canopy | 20.54407802 |
| Housing | — |
| Homeownership | 93.26318491 |
| Housing habitability | 71.65404851 |
| Low-inc homeowner severe housing cost burden | 91.04324394 |
| Low-inc renter severe housing cost burden | 10.08597459 |
| Uncrowded housing | 77.4541255 |
| Health Outcomes | — |
| Insured adults | 92.95521622 |
| Arthritis | 96.7 |
| Asthma ER Admissions | 83.1 |
| High Blood Pressure | 96.7 |
| Cancer (excluding skin) | 87.6 |
| Asthma | 98.2 |
| Coronary Heart Disease | 97.8 |
| Chronic Obstructive Pulmonary Disease | 98.8 |
| Diagnosed Diabetes | 89.0 |
| Life Expectancy at Birth | 82.5 |
| Cognitively Disabled | 90.0 |
| Physically  Disabled | 86.7 |
| Heart Attack ER Admissions | 85.7 |
| Mental Health Not Good | 89.0 |
| Chronic Kidney Disease | 93.4 |
| Obesity | 86.4 |

| | |
|---|---|
| Pedestrian Injuries | 19.6 |
| Physical Health Not Good | 96.4 |
| Stroke | 97.8 |
| Health Risk Behaviors | — |
| Binge Drinking | 13.6 |
| Current Smoker | 90.3 |
| No Leisure Time for Physical Activity | 79.7 |
| Climate Change Exposures | — |
| Wildfire Risk | 34.7 |
| SLR Inundation Area | 0.0 |
| Children | 59.5 |
| Elderly | 32.8 |
| English Speaking | 62.5 |
| Foreign-born | 55.2 |
| Outdoor Workers | 54.0 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 79.3 |
| Traffic Density | 60.1 |
| Traffic Access | 23.0 |
| Other Indices | — |
| Hardship | 15.7 |
| Other Decision Support | — |
| 2016 Voting | 78.1 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 10.0 |

| | |
|---|---|
| Healthy Places Index Score for Project Location (b) | 89.0 |
| Project Located in a Designated Disadvantaged Community (Senate Bill 535) | No |
| Project Located in a Low-Income Community (Assembly Bill 1550) | No |
| Project Located in a Community Air Protection Program Community (Assembly Bill 617) | No |

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

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

## 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

## 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Land Use | 900 sf office space<br>133,150 sf storage |
| Construction: Construction Phases | June 2023 - November 2024 |
| Operations: Vehicle Data | 191 ADT (1.43 trips/ksf) |
| Operations: Refrigerants | No warehouse cold storage |
| Construction: Dust From Material Movement | 7,600 cy export |