Appendix D

Air Quality and Greenhouse Gas

Radford Studio Center Project

Draft EIR

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Appendix D-1-Air Quality and Greenhouse Gas Emissions Methodology

AIR QUALITY AND GREENHOUSE GAS EMISSIONS METHODLOGY

Radford Studio Center

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Radford Studios

Air Quality and Greenhouse Gas Emissions Methodology

1. Introduction

Eyestone Environmental has been retained to conduct a comprehensive greenhouse gas (GHG) and criteria air pollutant emissions assessment for the Radford Studio Center Project (the "Project"). Emissions during both construction and operation of the Project were quantified. This assessment describes the methodology used to estimate the GHG and air pollutant emissions from existing and Project conditions and describes the methodology used to quantify GHG and air pollutant emission reductions from project design features and mitigation measures.

2. Air Pollutant and Greenhouse Gas Emissions Methodology

The Project would result in direct emissions of criteria pollutants and direct and indirect GHG emissions generated by different types of emissions sources, including:[1]

- Direct Emissions:
  - Construction: emissions associated with demolition of existing uses, shoring, excavation, grading, and construction-related equipment and vehicular activity;
  - Area source: emissions associated with consumer products, architectural coatings, and landscape equipment;
  - Energy source (building operations): emissions associated with space heating and cooling, and water heating;

[1] *Direct sources of emissions include Project-related vehicular trips and onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel). Whereas, indirect sources of emissions include offsite emissions associated with purchased electricity and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater)*

  - Mobile source: emissions associated with vehicles accessing the project site; and
  - Stationary source: emissions associated with stationary equipment (e.g., emergency generators).
  - Refrigerants: fugitive GHG emissions associated with building air conditioning and refrigeration equipment.

- Indirect Emissions:
  - Energy source (building operations): emissions associated with energy consumption, and lighting;
  - Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and
  - Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

a. Emission Inventories

Project-related construction and operation emissions were calculated using SCAQMD's recommended California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying criteria pollutant and GHG impacts from land use projects throughout California.[2]

CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB's on-road emission model (EMission FACtor model (EMFAC)) and off-road equipment emission model (Off-road Emissions Inventory Program model (OFFROAD)).

[2] *See www.caleemod.com.*

(1) Construction

Construction activities would generate emissions from off-road equipment usage, on-road vehicle travel (truck hauling, vendor deliveries, and workers commuting), architectural coating, and paving. Each of these source types is discussed in more detail below. The Project's construction emissions were calculated using the SCAQMD recommended CalEEMod (Version 2022.1). Please refer to CalEEMod construction output files for a complete listing of construction details modeled. CalEEMod default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths. It should be noted that the maximum daily emissions were predicted values for the worst-case day and do not represent the emissions that would occur for every day of Project construction. The maximum daily emissions were compared to the SCAQMD daily regional numeric indicators. Annual emissions were calculated based on the total number of hours each piece of equipment was used and the total number of vehicular trips (i.e., worker, vendor, and haul) over the duration of construction. In accordance with the SCAQMD's guidance, GHG emissions from construction were amortized over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years.[3] Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

(a) Emissions from Construction Equipment

The emission calculations associated with construction equipment are from off-road equipment engine use based on the equipment list and phase length. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel. Construction equipment emissions vary with engine model years in which newer equipment will emit fewer pollutants. As a conservative assumption, the CalEEMod model uses an emission rate for equipment which represents an average model year for available equipment within the Air Basin. CalEEMod calculates the exhaust emissions based on CARB OFFROAD methodology using the equation presented below.

Construction Off-Road Equipment:

$$\text{Emissions Diesel [lbs]} = \left(\sum_i \left(EF_i \times Pop_i \times AvgHP_i \times Load_i \times Activity_i \right.\right.$$

Where: EF_i = Emission factor from OFFROAD (lbs/hr)

Pop_i = Population (quantity of same equipment)

[3] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

$AvgHP_i$ = Maximum rated average horsepower (hp)

$Load_i$ = Load Factor (dimensionless)

$Activity_i$ = Hours of operation (hours)

i = Summation index

Fugitive dust emissions from use of off-road equipment were also calculated using CalEEMod based on the types of equipment used during grading activities and based on the amount of import/export from loading or unloading dirt into haul trucks. These methods have been adapted from USEPA's AP-42 method for Western Coal Mining. As recommended by SCAQMD, the fugitive dust emissions from the grading phase are calculated using the methodology described in USEPA AP-42. PM_{10} and $PM_{2.5}$ emissions from fugitive dust will be controlled by watering the construction site three times a day consistent with SCAQMD Rule 403 and were estimated to be reduced by 61 percent.

The Project would include mitigation measures to reduce on-site unpaved haul road emissions. This includes use of gravel roads and unpaved roads with a silt content of no more than five percent. Also, soil stabilizers certified by the California Air Resources Board would be applied to unpaved on-site roads for dust control during excavation activities.

(b) Emissions from On-Road Trips

Construction generates on-road vehicle exhaust, evaporative, and dust emissions from personal vehicles for worker commuting, vendor deliveries, and trucks for soil and material hauling. These emissions are based on the number of trips and VMT along with emission factors from EMFAC. The emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running from EMFAC as follows:

<u>Construction On-Road Equipment</u>:

Emissions pollutant (lbs) = VMT * EF running, pollutant

Where: VMT = vehicle miles traveled (miles)

EF running,pollutant = emission factor for running emissions (lbs/VMT)

Evaporative emissions, starting and idling emissions in CalEEMod were calculated by multiplying the number of trips times the respective emission factor for each pollutant.

(c) Emissions from Architectural Coating

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings. CalEEMod calculates the VOC evaporative emissions from application of residential and non-residential surface coatings using the following equation:

Construction Architectural Coating Emissions:

Emissions Architectural Coatings (lbs) $=EF_{AC}$ x F $*A_{paint}$

Where: EF_{AC} = Emission Factor (lb/sf)

A_{paint} = Building Surface Area (sf)

The CalEEMod tool assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage. All of the land use information provided by a metric other than square footage erewill be converted to square footage using the default conversions or user defined equivalence.

F = fraction of surface area [%].

The default values based on SCAQMD methods used in their coating rules are 75 percent for the interior surfaces and 25 percent for the exterior shell. Parking areas are based on 6-percent coverage.

The emission factor (EF) is based on the VOC content of the surface coatings and is calculated estimated using the equation below:

$EF_{AC} = C_{VOC}$/454(g/lb) x 3.785(L/gal)/180*sf)

Where: EF = emission factor (lb/sf)

C = VOC content (g/L or gram per liter)

The emission factors for coating categories were calculated using the equation above based on default VOC content from provided by the air districts or CARB's statewide limits in CalEEMod. Architectural coating VOC emission factors are also consistent with SCAQMD Rule 1113 as discussed above.

(d) Emissions from Paving

CalEEMod estimates VOC off-gassing emissions associated with asphalt paving of parking lots using the following equation:

$$Emissions_{AP} \text{ (lbs)} = EF_{AP} \times A_{parking}$$

Where: EF = emission factor (lb/acre)

A = area of the parking lot (acre)

Note: The Sacramento Metropolitan Air Quality Management District (SMAQMD) default emission factor is 2.62 lb/acre. This value is used as the default emission factor within CalEEMod

(e) Emissions from Groundwater Remediation

The groundwater that is pumped during the temporary construction dewatering efforts on-site may require treatment, pursuant to the applicable discharge permit. It was conservatively assumed that contaminated groundwater on-site would require treatment through a closed-loop system, which would minimize release of contaminants to the atmosphere during treatment. Water treatment would be performed using a granular activated carbon (GAC) system, which would consist of a holding tank, transfer pumps, filtration units and carbon vessels. The holding tank may be exposed to the atmosphere for brief maintenance activities. All other components of the system would be closed loop and result in minimal emissions during groundwater treatment. Emissions from treatment of groundwater were calculated based on water flow rate through the holding tank and potential exposure to the atmosphere. Although unlikely to occur during operations, it was conservatively assumed that VOCs in the contaminated water would be completely volatilized while flowing through the holding tank. GAC systems are proven technology with high removal efficiencies (up to 99.9 percent) for many VOCs, including TCE and tetrachlorethylene (PCE). It was conservatively assumed that approximately one percent of volatilized VOCs in the holding tank may be vented to the atmosphere. Emissions calculations from the treatment of groundwater were based on the maximum detected concentrations and also conservatively assume no depletion throughout the duration of dewatering.

(2) Operation

Similar to construction, the SCAQMD-recommended CalEEMod was used to calculate potential emissions generated by the Project, including area source, energy sources (electricity and natural gas), mobile source, stationary sources (emergency

generator), solid waste generation and disposal, water usage/wastewater generation, ans refrigeration.

(3) Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes consumer products, architectural coatings, and landscape maintenance equipment. Pollutant emissions generated by the Project were calculated using CalEEMod defaults, based upon the land uses that will be included in each project.

Consumer products are chemically formulated products used by household and institutional consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. SCAQMD did an evaluation of consumer product use compared to the total square footage of buildings using data from CARB consumer product Emission Inventory. To calculate the VOC emissions from consumer product use, the following equation was used in CalEEMod:

Emissions Consumer Products (lbs) = EF_{CP} x Building Area

Where:

EF_{CP} = pounds of VOC per building square foot

The factor is 1.98 x 10^{-5} lbs/sf for SCAQMD areas.

Building Area = the total square footage of all buildings including residential square footage

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. The operational emission methodology from architecture coating is the same as the construction methodology discussed above. All land use buildings are assumed to be repainted at a rate of 10 percent of area per year. This is based on the assumptions used by SCAQMD.

The combustion of fossil fuels to operate landscape equipment such as lawnmowers and trimmers, results in pollutant emissions. The emissions occur on-site and are considered a direct source of pollutant emissions. The emissions for landscaping equipment are based on the size of the land uses, the pollutant emission factors for fuel combustion. Pollutant emissions from landscaping equipment are generally calculated in CalEEMod as follows:

Landscaping Equipment:

Landscaping Equipment Emissions [lbs] = (Σ_i (Units × EF_{LE} × A_{LE})$_i$)

Where: Units = Number of land use units (same land use type) [1,000 sf]

EF_{LE} = Emission factor [grams (g)/1,000 sfday]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

(4) Energy Emissions (Electricity and Natural Gas)

Pollutant emissions are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits pollutant emissions directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. Pollutant emissions are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Energy demand emissions were calculated using the CalEEMod emissions inventory model. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 Building Energy Efficiency Standards (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod energy demand is based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) study.[4] The data is specific for Electricity Demand Forecast Zones (EDFZ) and, therefore, EDFZ 16 was selected for the Project Site based on the Project's address. CalEEMod includes 2019 Title 24 Energy Efficiency Standards when calculating project energy usage.

[4] *2019 consumption estimates from the CEC's (2020, 2021) 2018–2030 Uncalibrated Commercial Sector Forecast (Commercial Forecast) and the RASS (refer to Table G-28) of Appendix G in CalEEMod User's Guide, 2022.*

All-Electric Ordinance

In December 2022, the City approved Ordinance No. 187,714, which amends Divisions 2, 4, and 5 of Article 9 of Chapter IX of the LAMC to require all new buildings to be all-electric buildings with exceptions. The ordinance is applicable to new buildings in which an application for a building permit was submitted after June 1, 2023. Consistent with this new ordinance, Chapter IX of the LAMC, Section 99.02.202 defines an all-electric building as:

> *"A building that contains no combustion equipment, plumbing for combustion equipment, gas piping, or fuel gas serving any use including, but not limited to, space heating (including fireplaces), water heating (including pools and spas), cooking appliances (including barbeques), and clothes drying, within the building or building property lines, and instead uses electricity as the sole source of energy for all lighting, appliances and/or equipment, including, but not limited to, space heating, water heating, cooking appliances, and drying appliances."*

Chapter IX of the LAMC, Section 99.04.106.8 provides exemptions from the requirements for cooking equipment contained within kitchens in a public use area, such as restaurants, commissaries, cafeterias, and community kitchens as long as electrical infrastructure is installed. Gas-powered process equipment in institutions, such as hospitals, industrial, and laboratories, is also exempt. The LAMC is consistent with 2022 Title 24 goals of encouraging all-electric development, which requires new residential uses to be electric-ready (wiring installed for all-electric appliances). Buildings in Los Angeles account for 43 percent of greenhouse gas emissions—more than any other sector in the City. These LAMC requirements ensure that new buildings being constructed are built to leverage the increasingly clean electric grid, which is anticipated to be carbon-free by 2035, rather than relying on fossil fuels.

By default, CalEEMod 2022.1 assumes appliances such as water heating, clothes dryers and space heating are powered by natural gas. The CalEEMod 2022.1 model contains adjustments to take into account the increased electricity usage and decrease in GHG emissions as a result of all-electric development for residential uses. However, these adjustments are not yet available in CalEEMod 2022.1 for commercial uses (e.g., the Project). The CAPCOA GHG Handbook provides a methodology to calculate the equivalent electricity usage of an appliance that is normally powered by natural gas, such as clothes dryers, water heaters and space heating.[5] In order to account for the Project's

[5] *California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. Appendix C. Table E-15. December 2021.*

compliance with the new all-electric ordinance, calculations were performed to convert appliances which are typically powered by natural gas, to electricity powered. Conservatively, the CAPCOA GHG Handbook also assumes some appliances that are typically powered by electricity to be powered by natural gas by default (e.g., refrigeration and air conditioning). As CalEEMod 2022.1 categorizes electricity usage as either Title 24 (e.g., space heating and water heating) versus non-Title 24 (e.g., appliances), a specific conversion for each category provided in the CAPCOA guidance was not available. Thus, some natural gas categories within the CAPCOA GHG Handbook (e.g., refrigeration) are likely already included as electric within CalEEMod. Thus, the conversion between natural gas to electricity for these categories within the CAPCOA GHG Handbook would be conservative and overstate the total electricity usage. The calculations are provided in Appendix D of this Draft EIR.

Basecamp Operations

Basecamp areas would include parking, storage of mobile facilities, support vehicles, etc. While existing production activities occasionally require the use of small portable generators when electrical hookups are not available, the Project will provide a sufficient number of electrical hookups in basecamp areas such that use of gasoline or diesel portable generators will not be needed. In addition, the electricity usage and resultant GHG emissions associated with lighting and ventilation in basecamp areas is specifically included in this Draft EIR.

(a) Electricity

Because power plants are existing stationary sources permitted by air districts and/or the USEPA, criteria pollutant emissions are generally associated with the power plants themselves, and not individual buildings or electricity users. Additionally, criteria pollutant emissions from power plants are subject to local, state, and federal control measures, which can be considered to be the maximum feasible level of mitigation for stack emissions. In contrast, GHG emissions from power plants are not subject to stationary source permitting requirements to the same degree as criteria pollutants. As such, GHGs emitted by power plants may be indirectly attributed to individual buildings and electricity users, who have the greatest ability to decrease usage by applying mitigation measures to individual electricity “end uses.” CalEEMod therefore calculates GHG emissions (but not criteria pollutant emissions) from regional power plants associated with building electricity use.

Emissions associated with electricity demand are based on the size of the residential, commercial and retail land uses, the electrical demand factors for the land uses, the emission factors for the electricity utility provider, and the GWP values for the

GHGs emitted. Annual electricity GHG emissions in units of $MTCO_2e$ are calculated as follows:

Electricity:

Annual Emissions [$MTCO_2e$] = (Σ_i (Units × D_E × EF_E × GWP)$_i$) ÷ 2,204.62

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_E = Electrical demand factor [megawatt-hour (MWh)/1,000 sf/yr]

EF_E = GHG emission factor [pounds per megawatt-hour (MWh)]

GWP = Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]

2,204.62 = Conversion factor [pounds/MT]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

GHG emissions from electricity use are directly dependent on the electricity utility provider. The Los Angeles Department of Water and Power (LADWP) provides electric service to the Project Site. Thus, GHG intensity factors for LADWP were selected in CalEEMod. Intensity factors for GHGs due to electrical generation to serve the electrical demands of the existing condition were obtained from the LADWP 2022 Power Content Label, which provides a CO_2 intensity of 567 pounds of CO_2 per MWh for 2022. By 2030, at least 60 percent of electricity shall be obtained from renewable sources. As year-by-year data is currently not available, the CO_2 intensity factor for the Project buildout was determined based on straight line interpolation based on current and future year data points.

(b) Natural Gas

The direct source emissions associated with natural gas combustion are based on the size of the land uses and the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu). Natural gas emissions are calculated in CalEEMod as follows:

Natural Gas:

Natural Gas Emissions (lbs) = (Σ_i (Units × D_{NG} × EF_{NG})$_I$)

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_{NG} = Natural Gas combustion factor [MMBtu/1,000 sf]

EF_{NG} = Natural Gas combustion factor [pounds/MMBtu]

I = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

(5) Mobile Source Emissions

Mobile-source emissions were calculated using the CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and vehicle miles traveled (VMT). The Traffic Study prepared by Gibson Transportation Consulting had calculated Project VMT which was entered into CalEEMod in calculating Project mobile source emissions.

Modeling was also conducted using the Los Angeles County vehicle fleet mix for all vehicle types as provided in EMFAC2021.

Mobile source emissions were generally calculated in CalEEMod as follows:

Mobile:

Mobile Emissions [lbs] = (Σ_i (Units × ADT x D_{TRIP} × EF_i)

Where: Units = Number of vehicles (same vehicle model year and class)

ADT = Average daily trip rate [trips/day]

D_{TRIP} = Trip distance [miles/trip]

EF = Pollutant emission factor [pounds per mile]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

Mobile source operational emissions were calculated based on the Project VMT estimates provided by Gibson Transportation Consulting. [6] The Los Angeles Department of Transportation (LADOT) VMT Calculator was used.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the EPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use developments.[7] The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites.

The Project design includes characteristics that would reduce trips and VMT as compared to a standard project within the air basin as measured by the air quality model (CalEEMod). While these Project characteristics primarily reduce greenhouse gas emissions, they would also reduce criteria air pollutants discussed herein. These relative reductions in vehicle trips and VMT from a standard project within the air basin help quantify the criteria air pollutant emissions reductions achieved by locating the Project in any infill, HQTA area that promotes alternative modes of transportation.

Mobility Hub

The Project would include a Mobility Hub for employees, which would provide an off-street area for additional passenger pick-up/drop-off and temporary parking of carpools, vanpools, shuttles, ride-share, taxi, and other commercial and non-commercial vehicles. Shuttles traveling to and from the Mobility Hub would not be diesel and instead gasoline, natural gas, or electric powered. Electric vehicle (EV) chargers would be provided for the shuttle parking spaces. As a conservative assumption, shuttles traveling to and from the Mobility Hub would be powered by gasoline. Emission factors were based on EMFAC2021 Medium Heavy-Duty Trucks (MHDT) powered by gasoline. Emissions from gasoline

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[6] *Gibson Transportation Consulting, Inc., Transportation Assessment for the Radford Studio Center Project, Studio City, California. March 2024.*

[7] *Environmental Protection Agency, Mixed-Use Trip Generation Model. www.epa.gov/smartgrowth/mixed-use-trip-generation-model. Accessed January 30, 2024.*

powered vehicles resulting from employee vehicle trips were calculated using the CARB EMFAC2021 emission model. Calculations were based on emission factors for the EMFAC vehicle class LDA, LDT1 and LDT2,[8] consistent with CalEEMod default assumptions for employee vehicle trips. The fleet mix will accounted for existing baseline year (2023) and future buildout years (2028) and for the number of employee trips evaluated in the Draft EIR.[9]

Food Trucks

Commercial cooking activities are capable of producing criteria pollutants and related TACs. Television City currently allows food trucks to access the Project Site. Most of the food trucks are not equipped with cooking equipment (i.e., char broilers) since meals are often prepared offsite (e.g., sandwiches, salads). Pollutant emissions from food trucks were calculated based on emission factors provided in SCAQMD Rule 1138 (Appendix I) for commercial cooking operations.

(6) Stationary Source (Emergency Generator Emissions)

Emissions of GHGs associated with use of emergency generators were calculated using CalEEMod, in which emission factors are based on Table 3.4-1 (Gaseous Emission Factors for Large Stationary Diesel Engines) from EPA's AP-42: Compilation of Air Pollutant Emission Factors. The emissions are based on the horsepower rating of the diesel generator and the number of hours operated per year for testing purposes. Annual emergency generator GHG emissions in units of $MTCO_2e$ were calculated as follows:

Emergency Generator:

Emissions [lbs] = (Total HP x LF x HR × EF)

Where: Total HP = Total horsepower of emergency generators (Hp)
LF = Load Factor (CalEEMod default of 0.73)
HR = Hours Operated per Year
EF = AP-42 Emission Factor of 1.16 lb/hp-hr)

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[8] *LDA (light duty auto and equivalent to all passenger cars); LDT1 (light-duty trucks up to 3,750 pounds); and LDT2 (light-duty trucks between 3,751 and 5,750 pounds).*

[9] *As discussed above, the Project buildout may be extended to Year 2045. The worst-case scenario of Year 2028 buildout was analyzed as during future years, vehicle emissions would be lower due to more stringent emissions control regulations.*

(7) Solid Waste Emissions

The generation of municipal solid waste (MSW) from day-to-day operational activities generally consists of product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, plastic, and other items routinely disposed of in trash bins. A portion of the MSW is diverted to waste recycling and reclamation facilities. Waste that is not diverted is usually sent to local landfills for disposal. MSW that is disposed in landfills results in GHG emissions of CO_2 and CH_4 from the decomposition of the waste that occurs over the span of many years.

Emissions of GHGs associated with solid waste disposal were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the retail and restaurant land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted. Annual waste disposal GHG emissions in units of $MTCO_2e$ were calculated in CalEEMod as follows:

Solid Waste:

$$\text{Annual Emissions } [MTCO_2e] = \left(\Sigma_i \left(\text{Units} \times D_{MSW} \times EF_{MSW} \times GWP \right)_i \right) \div 1.1023$$

Where: Units = Number of land use units (same land use type) [1,000 sf]

D_{MSW} = Waste disposal rate [tons/1,000 sf/yr]

EF_{MSW} = GHG emission factor [tons/ton waste]

GWP = Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]

1.1023 = Conversion factor [tons/MT]

i = Summation index

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod allows the input of several variables to quantify solid waste emissions. The model requires the amount of waste disposed, which is the product of the waste disposal rate times the land use units. CalEEMod default annaual solid waste disposal rates used. The GHG emission factors, particularly for CH_4, depend on characteristics of the landfill, such as the presence of a landfill gas capture system and subsequent flaring or energy recovery. The default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery), which are statewide averages, were used in this

assessment. The Project includes a 76.4-percent recycling/diversion rate currently achieved within the City.[10]

(8) Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water and include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model. The emissions are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. CalEEMod default annual water demand and wastewater rates were used. GHG emissions due to electricity are calculated in CalEEMod as follows for indoor and outdoor water demand:

Water Supply, Treatment, and Distribution; Wastewater Treatment (electricity):

$$\text{Annual Emissions } [MTCO_2e] = (\Sigma_i \ (\text{Units} \times D_W \times (EI_W \div 1{,}000) \times EF_W \times GWP)_i \ ) \div 2{,}204.62$$

Where:
- Units = Number of land use units (same land use type) [1,000 sf]
- D_W = Water demand factor [million gallons (Mgal)/1,000 sf/yr]
- EI_W = Electricity intensity factor [kilowatt-hours (kWh)/Mgal]
- 1,000 = Conversion factor [kWh/MWh]
- EF_W = GHG emission factor [pounds/MWh]
- GWP = Global warming potential [CO_2 = 1, CH_4 = 21, N_2O = 310]
- 2,205 = Conversion factor [pounds/MT]
- *i* = Summation index

[10] *City of Los Angeles, Sustainable City pLAn, Waste & Landfills, http://plan.lamayor.org/portfolio/waste-landfills-3rd, accessed January 30, 2024.*

Note: For residential land uses, emission factors are specified in units of dwelling units (DU) instead of 1,000 sf.

CalEEMod provides options to account for the use of water saving features such as the use of low-flow water fixtures (e.g., low-flow faucets, low-flow toilets). The same electricity GHG emissions factors discussed above were used for water and wastewater energy usage. In addition, the calculation of Project GHG emissions from water/wastewater usage accounts for a 20 percent reduction in water/wastewater emissions with implementation of CalGreen requirements.

(9) Refrigerant Emissions

The estimate the fugitive GHG emissions associated with building air conditioning (A/C) and refrigeration equipment is based on the different types of refrigeration equipment used by different types of land uses. For example, an office may use various types of A/C equipment, while a supermarket may use both A/C equipment and refrigeration equipment. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains), operational and service refrigerant leak rates (from regular operation and routine servicing), and number of times serviced per lifetime. Each refrigerant has a GWP that is specific to that refrigerant. CalEEMod automatically generates a default A/C and refrigeration equipment inventory for each project land use subtype. 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. Note that CalEEMod does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime.

Radford Studio Center Project

Draft EIR
Appendix D-2-Summary of Air Emissions

- Estimate of Maximum Regional Project Daily Construction Emissions - 39-Month Buildout (2028)
- Estimate of Maximum Localized Daily Project Construction Emissions
- Estimate of Maximum Project daily Operational Emissions (Proposed Development Program) - At Project Buildout (2028)
- Estimate of Maximum Project Daily Operational Emissions (Land Use Exchange Maximum Demand Scenario)— At Project Buildout (2028)
- Estimated Maximum Daily Regional Emissions from Project Concurrent Construction (Unmitigated) and Operations
- Construction Air Quality Analysis Assumptions (39-month Scenario)
- 20-Year Construction Scenario - Schedule and Trips
- 20-Year Construction Scenario - Equipment Mix
- 20-Year Construction Scenario - Phasing Plan
- Haul Truck Staging Locations
- CO Hotspots Analysis

Radford Studios

Estimate of Maximum Regional Project Daily Construction Emissions - 39-Month Buildout (2028)

Project Site Construction						lbs/day	
2.2 Construction Emissions by Year, Unmitigated							
Year	TOG	ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily - Summer (Max)							
2025	0	0	0	0	0	0	0
2026	52	43	228	282	1	121	25
2027	40	38	80	186	0	49	10
2028	39	37	73	159	0	36	8
Daily - Winter (Max)							
2025	13	6	168	105	1	78	15
2026	41	38	161	179	1	78	15
2027	40	38	82	170	0	49	10
2028	40	37	78	165	0	49	10

2.3 Construction Emissions by Year, Mitigated							
Year	TOG	ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily - Summer (Max)							
2026	44	37	170	301	1	73	18
2027	35	34	43	199	0	35	8
2028	34	33	39	172	0	26	6
Daily - Winter (Max)							
2025	10	3	142	111	1	43	11
2026	36	34	137	191	1	43	11
2027	35	34	45	183	0	35	8
2028	35	33	44	178	0	35	8

Project Off-site Improvements							
2.2 Construction Emissions by Year, Unmitigated							
Year	TOG	ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily - Summer (Max)							
2027	2	2	12	20	0	1	1
2028	2	2	14	21	0	1	1
Daily - Winter (Max)							
2027	2	2	12	20	0	1	1
2028	2	2	15	21	0	1	1

2.3 Construction Emissions by Year, Mitigated							
Year	TOG	ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily - Summer (Max)							
2027	1	1	8	21	0	1	0
2028	1	1	6	26	0	1	0
Daily - Winter (Max)							
2027	1	1	8	20	0	1	0
2028	1	1	6	26	0	1	0

Combined (Project Site Construction + Offsite Improvements)

2.2 Construction Emissions by Year, Unmitigated

Year							
Daily - Summer (Max)							
2025	0	0	0	0	0	0	0
2026	52	43	228	282	1	121	25
2027	42	39	92	206	0	50	11
2028	41	38	87	180	0	38	9
Daily - Winter (Max)							
2025	13	6	168	105	1	78	15
2026	41	38	161	179	1	78	15
2027	42	39	95	190	0	50	11
2028	42	39	92	186	0	50	11

2.3 Construction Emissions by Year, Mitigated

Year							
Daily - Summer (Max)							
2025	0	0	0	0	0	0	0
2026	44	37	170	301	1	73	18
2027	37	35	51	220	0	36	8
2028	35	34	45	198	0	27	6
Daily - Winter (Max)							
2025	10	3	142	111	1	43	11
2026	36	34	137	191	1	43	11
2027	37	35	54	204	0	36	8
2028	36	34	50	203	0	36	8

Radford Studios

Estimate of Maximum Localized Daily Project Construction Emissions - Unmitigated

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated	**Phase 1**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	9	55	69	0	2	0	2	2	0	2
2027	7	31	41	0	1	0	1	1	0	1
Daily - Winter (Max)										
2025	5	41	65	0	2	1	3	2	0	2
2026	7	62	85	0	3	1	3	2	0	2
2027	7	31	41	0	1	0	1	1	0	1

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated	**Phase 2**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2030	1	8	19	0	0	1	2	0	0	0
2031	4	38	67	0	1	17	18	1	2	3
2032	18	27	38	0	1	1	2	1	0	1
2033	18	29	44	0	1	1	2	1	0	1
Daily - Winter (Max)										
2030	1	8	19	0	0	1	2	0	0	0
2031	4	40	60	0	1	16	18	1	2	3
2032	18	39	60	0	1	16	18	1	2	3
2033	18	29	44	0	1	1	2	1	0	1

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated	**Phase 3**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2038	5	44	85	0	1	31	32	1	3	4
2039	24	41	72	0	1	1	2	1	0	1
Daily - Winter (Max)										
2038	27	62	115	0	2	31	32	1	3	4
2039	24	41	72	0	1	1	2	1	0	1
2040	22	23	39	0	0	1	1	0	0	0

2. Emissions Summary

2.3 Construction Emissions by Year, Ummitigated	**Phase 4**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2044	7	18	32	0	0	12	13	0	1	2
2045	7	7	11	0	0	1	1	0	0	0
Daily - Winter (Max)										
2044	7	9	15	0	0	1	1	0	0	0
2045	7	8	15	0	0	1	1	0	0	0

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Estimate of Maximum Localized Daily Project Construction Emissions - Unmitigated

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated **Offsite**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0	0	0	0
2027	1	12	18	0	0	0	1	0	0	0
2028	2	12	19	0	0	0	0	0	0	0
Daily - Winter (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0	0	0	0
2027	1	12	18	0	0	0	1	0	0	0
2028	2	12	19	0	0	0	0	0	0	0

2. Emissions Summary

2.3 Construction Emissions by Year, Ummitigated **Phase 4 with Offsite**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2044	9	31	51	0	1	13	13	1	1	2
2045	9	19	30	0	1	1	1	1	0	1
Daily - Winter (Max)										
2044	9	21	34	0	1	1	2	1	0	1
2045	9	21	34	0	1	1	2	1	0	1

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated **All-At-Once**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	36	95	117	0	3	62	65	3	6	9
2027	32	58	73	0	2	20	22	2	2	4
2028	33	58	79	0	2	14	16	2	1	3
Daily - Winter (Max)										
2025	5	46	57	0	2	47	48	2	5	6
2026	32	61	73	0	2	47	48	2	5	6
2027	32	58	73	0	2	20	22	2	2	4
2028	33	58	79	0	2	20	21	2	2	4

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated **All-At-Once + Offsite**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	36	95	117	0	3	62	65	3	6	9
2027	33	70	91	0	3	20	22	2	2	4
2028	34	70	98	0	2	14	16	2	1	4
Daily - Winter (Max)										
2025	5	46	57	0	2	47	48	2	5	6
2026	32	61	73	0	2	47	48	2	5	6
2027	33	70	91	0	3	20	22	2	2	4
2028	34	70	98	0	2	20	22	2	2	4

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Estimate of Maximum Localized Daily Project Construction Emissions - Mitigated

2. Emissions Summary										
2.3 Construction Emissions by Year, Mitigated	**Phase 1**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	5	16	82	0	0	0	1	0	0	0
2027	4	15	47	0	0	0	0	0	< 0.005	0
Daily - Winter (Max)										
2025	1	10	75	0	0	1	1	0	0	0
2026	4	18	101	0	1	1	1	1	0	1
2027	4	15	47	0	0	0	0	0	< 0.005	0

2. Emissions Summary										
2.3 Construction Emissions by Year, Mitigated	**Phase 2**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2030	0	3	22	0	0	1	1	0	0	0
2031	2	19	76	0	0	4	5	0	0	1
2032	17	14	45	0	0	0	1	0	0	0
2033	16	16	52	0	0	0	1	0	0	0
Daily - Winter (Max)										
2030	0	3	22	0	0	1	1	0	0	0
2031	2	21	70	0	0	4	4	0	0	1
2032	16	21	70	0	0	4	4	0	0	1
2033	16	16	52	0	0	0	1	0	0	0

2. Emissions Summary										
2.3 Construction Emissions by Year, Mitigated	**Phase 3**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2038	3	21	103	0	1	8	8	1	1	1
2039	22	20	90	0	0	0	1	0	0	0
Daily - Winter (Max)										
2038	23	30	141	0	1	8	8	1	1	1
2039	22	20	90	0	0	0	1	0	0	1
2040	21	15	47	0	0	0	0	0	0	0

2. Emissions Summary										
2.3 Construction Emissions by Year, Mitigated	**Phase 4**									
Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2044	7	12	36	0	0	3	3	0	0	1
2045	7	7	12	0	0	0	0	0	0	0
Daily - Winter (Max)										
2044	7	5	18	0	0	1	1	0	0	0
2045	7	5	18	0	0	0	1	0	0	0

2. Emissions Summary

2.3 Construction Emissions by Year, Unmitigated **Offsite**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0	0	0	0
2027	1	12	18	0	0	0	1	0	0	0
2028	2	12	19	0	0	0	0	0	0	0
Daily - Winter (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	0	0	0	0	0	0	0	0	0	0
2027	1	12	18	0	0	0	1	0	0	0
2028	2	12	19	0	0	0	0	0	0	0

2. Emissions Summary

2.3 Construction Emissions by Year, Mitigated **Phase 4 with Offsite**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2044	8	25	55	0	1	3	4	1	0	1
2045	8	19	31	0	1	0	1	0	0	1
Daily - Winter (Max)										
2044	8	17	37	0	1	1	2	1	0	1
2045	8	17	37	0	1	1	1	1	0	1

2. Emissions Summary

2.3 Construction Emissions by Year, Mitigated **All-At-Once**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	29	37	136	0	1	16	17	1	2	2
2027	27	22	86	0	1	7	7	0	1	1
2028	28	23	92	0	1	5	6	1	1	1
Daily - Winter (Max)										
2025	2	20	63	0	0	13	13	0	1	2
2026	27	22	86	0	1	13	13	0	1	2
2027	27	22	86	0	1	7	7	0	1	1
2028	28	23	92	0	1	7	7	1	1	1

2.3 Construction Emissions by Year, Mitigated **All-At-Once + Offsite**

Year	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)										
2025	0	0	0	0	0	0	0	0	0	0
2026	29	37	136	0	1	16	17	1	2	2
2027	29	33	104	0	1	7	8	1	1	2
2028	30	36	111	0	1	5	6	1	1	1
Daily - Winter (Max)										
2025	2	20	63	0	0	13	13	0	1	2
2026	27	22	86	0	1	13	13	0	1	2
2027	29	33	104	0	1	7	8	1	1	2
2028	30	36	111	0	1	7	8	1	1	2

Estimate of Maximum Project daily Operational Emissions (Proposed Development Program) - At Project Buildout (2028)

Operation Emissions

Existing Regional Emissions (Existing Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	29	<1	33	< 0.005	<1	<1
Energy	<1	5	5	<1	<1	<1
Mobile	28	23	205	<1	38	10
Emergency Generator	<1	10	2	<1	<1	<1
Charbroiler	2	<1	<1	<1	4	2
Onsite Trucks	<1	1	5	<1	1	<1
Total	60	40	250	1	44	14
Existing Regional Emissions (Buildout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	29	<1	33	< 0.005	<1	<1
Energy	<1	5	5	<1	<1	<1
Mobile	22	16	155	<1	38	10
Emergency Generator	<1	10	2	<1	<1	<1
Charbroiler	3	<1	<1	<1	4	2
Onsite Trucks	<1	<1	5	<1	1	<1
Total	55	32	200	1	44	14
Project Regional Emissions (Buildout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	54	<1	65	< 0.005	<1	<1
Energy	<1	3	3	<1	<1	<1
Mobile	47	33	325	<1	79	20
Emergency Generator	<1	10	4	<1	<1	<1
Charbroiler	3	<1	<1	<1	7	4
Onsite Trucks	<1	2	14	<1	3	<1
Total	106	49	411	2	89	26
Incremental Regional Emissions (Project Less Existing)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	26	<1	32	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	25	17	170	<1	41	11
Emergency Generator	<1	<1	2	<1	<1	<1
Charbroiler	<1	<1	<1	<1	2	1
Onsite Trucks	<1	1	9	<1	1	<1
Total	51	16	211	<1	45	12
Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Difference	**(4)**	**(39)**	**(339)**	**(150)**	**(105)**	**(43)**
Impact	No	No	No	No	No	No

Localized

Existing Localized Emissions (Existing Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	33	<1	<1
Energy	5	5	<1	<1
Emergency Generator	10	2	<1	<1
Charbroiler	<1	<1	4	2
Onsite Trucks	1	5	1	<1
Total	17	45	7	4
Existing Localized Emissions (Buildout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	33	<1	<1
Energy	5	5	<1	<1
Emergency Generator	10	2	<1	<1
Charbroiler	<1	<1	4	2
Onsite Trucks	<1	5	1	<1
Total	17	45	7	4
Project Localized Emissions (Buildout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	65	<1	<1
Energy	3	3	<1	<1
Emergency Generator	10	4	<1	<1
Charbroiler	<1	<1	7	4
Onsite Trucks	2	14	3	<1
Total	16	86	10	5
Incremental Localized Emissions (Project Less Existing)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	32	<1	<1
Energy	(2)	(2)	(0)	(0)
Emergency Generator	0	2	0	0
Charbroiler	0	0	2	1
Onsite Trucks	1	9	1	0
Total	(1)	41	3.6	1.6
Threshold	144	1434	4	2
Difference	(145)	(1393)	(0.4)	(0.4)
Impact	**No**	**No**	**No**	**No**

Estimate of Maximum Project daily Operational Emissions (Proposed Development Program) - At Project Buildout (2028)

Operation Emissions

Existing Regional Emissions (Existing Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	29	<1	33	<1	<1	<1
Energy	<1	5	5	<1	<1	<1
Mobile	29	21	219	<1	38	10
Emergency Generator	<1	10	2	<1	<1	<1
Charbroiler	3	<1	<1	<1	4	2
Onsite Trucks	<1	1	5	<1	1	<1
Total	62	37	264	1	44	14
Existing Regional Emissions (Buildout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	29	<1	33	<1	<1	<1
Energy	<1	5	5	<1	<1	<1
Mobile	23	14	165	<1	38	10
Emergency Generator	<1	10	2	<1	<1	<1
Charbroiler	3	<1	<1	<1	4	2
Onsite Trucks	<1	<1	5	<1	1	<1
Total	56	31	210	1	44	14
Project Regional Emissions (Buildout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	54	<1	65	<1	<1	<1
Energy	<1	3	3	<1	<1	<1
Mobile	47	30	347	<1	79	20
Emergency Generator	<1	10	4	<1	<1	<1
Charbroiler	3	<1	<1	<1	7	4
Onsite Trucks	<1	2	14	<1	3	<1
Total	106	46	433	2	89	26
Incremental Regional Emissions (Project Less Existing)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Area	26	<1	32	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	25	16	182	<1	41	11
Emergency Generator	<1	<1	2	<1	<1	<1
Charbroiler	<1	<1	<1	<1	2	1
Onsite Trucks	<1	1	9	<1	1	<1
Total	51	15	223	<1	45	12
Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Difference	**(4)**	**(40)**	**(327)**	**(150)**	**(105)**	**(43)**
Impact	No	No	No	No	No	No

Localized

Existing Localized Emissions (Existing Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	33	<1	<1
Energy	5	5	<1	<1
Emergency Generator	10	2	<1	<1
Charbroiler	<1	<1	4	2
Onsite Trucks	1	5	1	<1
Total	17	45	7	4
Existing Localized Emissions (Buildout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	33	<1	<1
Energy	5	5	<1	<1
Emergency Generator	10	2	<1	<1
Charbroiler	<1	<1	4	2
Onsite Trucks	<1	5	1	<1
Total	17	45	7	4
Project Localized Emissions (Buildout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	65	<1	<1
Energy	3	3	<1	<1
Emergency Generator	10	4	<1	<1
Charbroiler	<1	<1	7	4
Onsite Trucks	2	14	3	<1
Total	16	86	10	5
Incremental Localized Emissions (Project Less Existing)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	<1	32	<1	<1
Energy	(2)	(2)	(0)	(0)
Emergency Generator	0	2	0	0
Charbroiler	0	0	2	1
Onsite Trucks	1	9	1	0
Total	(1)	41	3.6	1.6
Threshold	144	1434	4	2
Difference	(145)	(1393)	(0.4)	(0.4)
Impact	**No**	**No**	**No**	**No**

Estimate of Maximum Project Daily Operational Emissions (Land Use Exchange Maximum Demand Scenario)— At Project Buildout (2028)

Operation Emissions							**Localized**				
Existing Regional Emissions (Buidout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$	Existing Localized Emissions (Buidout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	29	<1	33	< 0.005	<1	<1	Area	<1	33	<1	<1
Energy	<1	5	5	<1	<1	<1	Energy	5	5	<1	<1
Mobile	22	16	155	<1	38	10					
Emergency Generator	<1	10	2	<1	<1	<1	Emergency Generator	10	2	<1	<1
Charbroilers	3	<1	<1	<1	4	2	Charbroilers	<1	<1	4	2
Onsite Trucks	<1	<1	5	<1	1	<1	Onsite Trucks	<1	5	1	<1
Total	55	32	200	1	44	14	Total	17	45	7	4
Project Regional Emissions (Buildout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$	Project Localized Emissions (Buildout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	54	<1	65	<1	<1	<1	Area	<1	65	<1	<1
Energy	<1	3	3	<1	<1	<1	Energy	3	3	<1	<1
Mobile	47	33	329	<1	79	21					
Emergency Generator	<1	10	4	<1	<1	<1	Emergency Generator	10	4	<1	<1
Charbroilers	3	<1	<1	<1	7	4	Charbroilers	<1	<1	7	4
Onsite Trucks	<1	3	14	<1	3	<1	Onsite Trucks	3	14	3	<1
Total	107	50	415	2	90	26	Total	17	86	10	5
Incremental Regional Emissions (Project Less Existing)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$	Incremental Localized Emissions (Project Less Exis	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	26	<1	32	#VALUE!	<1	<1	Area	<1	32	<1	<1
Energy	-<1	-<1	-<1	-<1	-<1	-<1	Energy	(2)	(2)	(0)	(0)
Mobile	25	18	174	<1	42	11					
Emergency Generator	<1	<1	2	<1	<1	<1	Emergency Generator	0	2	0	0
Charbroilers	<1	<1	<1	<1	2	1	Charbroilers	0	0	2	1
Onsite Trucks	<1	2	9	<1	1	<1	Onsite Trucks	2	9	1	0
Total	51	17	215	<1	46	12	Total	(0)	41	3.6	2
Threshold	**55**	**55**	**550**	**150**	**150**	**55**	**Threshold**	144	1434	4	2
Difference	**(4)**	**(38)**	**(335)**	**(150)**	**(104)**	**(43)**	**Difference**	(145)	(1393)	(0)	(0)
Impact	No	No	No	No	No	No	**Impact**	**No**	**No**	**No**	**No**

Estimate of Maximum Project Daily Operational Emissions (Land Use Exchange Maximum Demand Scenario)— At Project Buildout (2028)

Operation Emissions							**Localized**				
Existing Regional Emissions (Buidout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$	Existing Localized Emissions (Buidout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	29	<1	33	<1	<1	<1	Area	<1	33	<1	<1
Energy	<1	5	5	<1	<1	<1	Energy	5	5	<1	<1
Mobile	23	14	165	<1	38	10					
Emergency Generator	<1	10	2	<1	<1	<1	Emergency Generator	10	2	<1	<1
Charbroilers	3	<1	<1	<1	4	2	Charbroilers	<1	<1	4	2
Onsite Trucks	<1	<1	5	<1	1	<1	Onsite Trucks	<1	5	1	<1
Total	56	31	210	1	44	14	Total	17	45	7	4
Project Regional Emissions (Buildout Year)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$	Project Localized Emissions (Buildout Year)	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	54	<1	65	<1	<1	<1	Area	<1	65	<1	<1
Energy	<1	3	3	<1	<1	<1	Energy	3	3	<1	<1
Mobile	48	30	351	<1	79	21					
Emergency Generator	<1	10	4	<1	<1	<1	Emergency Generator	10	4	<1	<1
Charbroilers	3	<1	<1	<1	7	4	Charbroilers	<1	<1	7	4
Onsite Trucks	<1	3	14	<1	3	<1	Onsite Trucks	3	14	3	<1
Total	107	47	437	2	90	26	Total	17	86	10	5
Incremental Regional Emissions (Project Less Existing)	ROG	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$	Incremental Localized Emissions (Project Less Ex	NO_x	CO	PM_{10}	$PM_{2.5}$
Area	26	<1	32	<1	<1	<1	Area	<1	32	<1	<1
Energy	-<1	-<1	-<1	-<1	-<1	-<1	Energy	(2)	(2)	(0)	(0)
Mobile	25	16	186	<1	42	11					
Emergency Generator	<1	<1	2	<1	<1	<1	Emergency Generator	0	2	0	0
Charbroilers	<1	<1	<1	<1	2	1	Charbroilers	0	0	2	1
Onsite Trucks	<1	2	9	<1	1	<1	Onsite Trucks	2	9	1	0
Total	51	16	227	<1	46	12	Total	(0)	41	3.6	1.6
Threshold	**55**	**55**	**550**	**150**	**150**	**55**	**Threshold**	144	1434	4	2
Difference	**(4)**	**(39)**	**(323)**	**(150)**	**(104)**	**(43)**	**Difference**	(145)	(1393)	(0.4)	(0.4)
Impact	No	No	No	No	No	No	**Impact**	**No**	**No**	**No**	**No**

Radford Studio Center

Estimated Maximum Daily Regional Emissions from Project Concurrent Construction (Unmitigated) and Operations

2.6 Operations Emissions by Sector (Unmitigated) - Phase 1-3 + Existing to Remain

Sector	ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily, Summer (Max)						
Mobile	45	28	328	<1	74	19
Area	52	<1	65	< 0.005	<1	<1
Energy	<1	4	3	<1	<1	<1
Water						
Waste						
Refrig.						
Total	97	32	396	<1	75	20
Daily, Winter (Max)						
Mobile	44	31	307	<1	74	19
Area	52	<1	65	< 0.005	<1	<1
Energy	<1	4	3	<1	<1	<1
Water						
Waste						
Refrig.						
Total	96	35	375	<1	75	20
Max Regional	**101**	**46**	**404**	**1**	**81**	**23**
Max Localized		**13**	**83**		**10**	**5**
Project Localized Generator, Charbroiler, Trucks'	**5**	**12**	**18**		**10**	**5**
Existing Regional	56	31	210	0	44	14
Net Regional	**45**	**15**	**194**	**0**	**37**	**9**
Existing Localized (Area)		0	65		0	0
Existing Localized (Charbroiler and Emergency Generator)	4	11	8		6	4
Existing Localized Total		12	72		6	4
Net Localized		**1**	**11**		**4**	**2**

2.3 Construction Emissions by Year, Unmitigated - REGIONAL

Year		ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily - Summer (Max)							
	2028	0.6	5.4	8.5	0.0	2.1	0.5
	2029	10.3	20.2	56.0	0.1	10.4	2.7
Daily - Winter (Max)							
	2028	5.9	119.0	98.1	0.6	43.5	10.8
	2029	13.7	123.0	114.0	0.6	46.6	11.6
	2030	8.5	14.2	28.1	0.0	3.9	1.1
Max		**13.7**	**123.0**	**114.0**		**46.6**	**11.6**
Combined		**59**	**138**	**308**	**0**	**83**	**21**
Operational Threshold		55	55	550	150	150	55
Construction Threshold		75	100	550	150	150	55
Exceed Threshold?		Yes	Yes	No	No	No	No

Radford Studio Center

Estimated Maximum Daily Regional Emissions from Project Concurrent Construction (Mitigated) and Operations

2.6 Operations Emissions by Sector (Unmitigated) - Phase 1-3 + Existing to Remain

Sector	ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily, Summer (Max)						
Mobile	45	28	328	<1	74	19
Area	47	<1	65	< 0.005	<1	<1
Energy	<1	4	3	<1	<1	<1
Water						
Waste						
Refrig.						
Total	92	32	396	<1	75	20
Daily, Winter (Max)						
Mobile	44	31	307	<1	74	19
Area	47	<1	65	< 0.005	<1	<1
Energy	<1	4	3	<1	<1	<1
Water						
Waste						
Refrig.						
Total	91	35	375	<1	75	20
Max Regional	**96**	**46**	**404**	**1**	**81**	**23**
Max Localized		**13**	**83**		**10**	**5**
Project Localized Generator, Charbroiler, Trucks'	**5**	**12**	**18**		**10**	**5**
Existing Regional	56	31	210	0	44	14
Net Regional	**40**	**15**	**194**	**0**	**37**	**9**
Existing Localized (Area)		0	65		0	0
Existing Localized (Charbroiler and Emergency Generator)	4	11	8		6	4
Existing Localized Total		12	72		6	4
Net Localized		**1**	**11**		**4**	**2**

2.3 Construction Emissions by Year, Mitigated - REGIONAL

Year		ROG	NOx	CO	SO_2	PM10T	PM2.5T
Daily - Summer (Max)							
	2028	0.2	2.9	8.5	0.0	1.9	0.4
	2029	9.2	10.3	60.5	0.1	9.3	2.3
Daily - Winter (Max)							
	2028	4.2	103.0	104.0	0.6	33.3	9.2
	2029	11.6	104.0	122.0	0.6	36.2	10.0
	2030	8.1	10.4	30.1	0.0	3.6	1.0
Max		**11.6**	**104.0**	**122.0**		**36.2**	**10.0**
Combined		**52**	**119**	**316**	**0**	**73**	**19**
Operational Threshold		55	55	550	150	150	55
Construction Threshold		75	100	550	150	150	55
Exceed Threshold?		No	Yes	No	No	No	No

Radford Studio

Construction Air Quality Analysis Assumptions

39-Month Buildout (2028)

Construction Details	Start Date	End Date	Duration (months)	Work Days
Overall Duration	10/1/2025	12/30/2028	39	
Demolition	10/1/2025	6/30/2026	9	195
Grading / Excavation	12/1/2025	9/30/2026	10	217
Structure / Enclosure	4/1/2026	11/30/2028	32	695
Mat Foundation	7/1/2026	2/28/2028	20	433
Paving / Landscaping	7/1/2028	11/30/2028	5	107
Architectural Coatings / Finishes	7/1/2026	12/30/2028	30	652

Off-site Construction

Construction Details	Start Date	End Date	Duration (months)	Work Days
Overall Duration	1/1/2027	11/30/2028	23	
Undergrounding	1/1/2027	12/31/2027	12	261
Radford and Carpenter (Paving)	8/1/2027	12/31/2027	5	110
Radford Mobility Connector (Bridge)	1/1/2028	11/30/2028	11	239

Equipment	Demo	Grading/ Excavation	Mat Foundation	Structure/ Enclosure	Architectural Coatings /Finishes	Paving/ Landscape	Radford Ave and Alley (Undergrounding)	Radford, Carpenter and Colfax Ave (Paving)	Mobility Connector (Bridge Constructio n
Air Compressor	1				6				
Aerial Lift (Electric)				10	10				
Bore/Drill Rig		2							
Cement and Mortar Mixers									
Concrete/Industrial Saws									
Cranes (Tower)			2	2	2				
Cranes (Mobile)		2		3	3				2
Crawler Tractors									
Crushing/Proc. Equipment									
Excavators	3	3							
Forklifts				4	4				
Generator Sets									
Graders		1					1		
Off-Highway Tractors									
Other Equipment				4					
Water Truck	1	2							
Pavers									
Paving Equipment						1		2	
Pumps		2	6	2	2				
Plate Compactors			0						
Rollers						1		4	
Rough Terrain Forklifts				4	4				
Rubber Tired Dozers									
Rubber Tired Loaders		3					1		2
Scrapers									
Signal Boards						1			
Skid Steer Loaders						2			
Surfacing Equipment									
Sweeper / Scrubbers									
Tractors/Loaders/Backhoes	3	2		1			1		2
Trenchers						2	1		2
Welders		2		2					
Other ( )									
Total Pieces	**8**	**19**	**8**	**32**	**31**	**7**	**4**	**6**	**8**

Landfills	Distance from Project to Landfill (mi)
Sunshine Canyon	16
Chiquita Canyon	34

Trucks and Employees	Maximum	
Phase	Trucks per Day	Employees per day
Demolition	12	28
Grading/Excavation	423	20
Mat Foundation	15	228
Structure / Enclosure	110	411
Architectural Coatings / Finishes	19	246
Paving	5	9
Offsite Improvements (Undergrounding)	4	5
Offsite Improvements (Bridge Construction)	31	10
Offsite Improvements (Radford and Carpenters)	5	8

Limited amounts of contaminated soil may be encountered during excavation. If contaminated soil is excavated, the number of daily haul trucks hauling contaminated soil would be less than the 423 maximum trucks per day specified in the assumptions

Note: Grading/Excavation phase takes into account dewatering activities.

Source: AECOM RSC-Manpower - Preliminary EIR Construction Assumptions

Radford Studio

20-Year Construction Scenario - Schedule and Trips

Year 2025-2027

Construction Details	Start Date	End Date	Duration (months)	Work Days	Truck Trips	Employees
Overall Duration	10/1/2025	4/30/2027	19	413		
Demolition	10/1/2025	1/31/2026	4	88	4	8
Grading	12/1/2025	2/28/2026	3	65	2	4
Foundation	1/1/2026	4/30/2026	4	86	2	78
Building Exterior	2/1/2026	8/30/2026	7	150	13	105
Paving	1/1/2027	4/30/2027	4	86	2	10
Architectural Coating	5/1/2026	4/30/2027	12	261	2	61

Year 2031-2033

Construction Details	Start Date	End Date	Duration (months)	Work Days	Truck Trips	Employees
Overall Duration	6/1/2031	11/30/2033	30	653		
Demolition	6/1/2031	9/30/2031	4	87	10	14
Grading	6/1/2031	2/28/2032	9	195	233	10
Foundation	8/1/2031	5/30/2032	10	216	12	78
Building Exterior	10/1/2031	5/30/2033	20	434	80	83
Paving	1/1/2033	5/30/2033	5	106	10	10
Architectural Coating	4/1/2032	11/30/2033	20	435	5	323

Year 2038-2040

Construction Details	Start Date	End Date	Duration (months)	Work Days	Truck Trips	Employees
Overall Duration	1/1/2038	2/28/2040	26	563		
Demolition	1/1/2038	5/30/2038	5	106	10	15
Grading	1/1/2038	12/31/2038	12	261	350	10
Foundation	6/1/2038	2/28/2039	9	195	10	137
Building Exterior	8/1/2038	10/30/2039	15	325	20	165
Paving	8/1/2039	2/28/2040	7	152	10	10
Architectural Coating	10/1/2038	2/28/2040	17	368	5	284

Year 2044-2045

Construction Details	Start Date	End Date	Duration (months)	Work Days	Truck Trips	Employees
Overall Duration	3/1/2044	8/29/2045	18	391		
Demolition	3/1/2044	4/30/2044	2	44	4	14
Grading	5/1/2044	6/30/2044	2	44	338	15
Foundation	5/1/2044	7/30/2044	3	65	5	57
Building Exterior	6/1/2044	1/31/2045	8	175	31	205
Paving	5/1/2045	8/29/2045	4	87	10	10
Architectural Coating	8/1/2044	8/29/2045	13	282	6	106

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20-Year Construction Scenario - Equipment Mix

Phase 1

Equipment	Demo	Grading/ Excavation	Mat Foundation	Structure/ Enclosure	Architectural Coatings /Finishes	Paving/ Landscape
Air Compressor	1				6	
Aerial Lift (Electric)				10	10	
Bore/Drill Rig		2				
Cement and Mortar Mixers						
Concrete/Industrial Saws						
Cranes (Tower)			2	2	2	
Cranes (Mobile)		2		3	3	
Crawler Tractors						
Crushing/Proc. Equipment				0		
Excavators	3	3				
Forklifts				4	4	
Generator Sets						
Graders		1				
Off-Highway Tractors						
Other Equipment				4		
Water Truck	1	2				
Pavers						
Paving Equipment						1
Pumps		2	6	2	2	
Plate Compactors			0			
Rollers						1
Rough Terrain Forklifts				4	4	
Rubber Tired Dozers						
Rubber Tired Loaders		3				
Scrapers						
Signal Boards						1
Skid Steer Loaders						2
Surfacing Equipment						
Sweeper / Scrubbers						
Tractors/Loaders/Backhoes	3	2		1		
Trenchers						2
Welders		2		2		
Other ( )						
Total Pieces	**8**	**19**	**8**	**32**	**31**	**7**

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20-Year Construction Scenario - Equipment Mix

Phase 2

Equipment	Demo	Grading/ Excavation	Mat Foundation	Structure/ Enclosure	Architectural Coatings /Finishes	Paving/ Landscape
Air Compressor	1				4	
Aerial Lift (Electric)				2	8	
Bore/Drill Rig		2				
Cement and Mortar Mixers						
Concrete/Industrial Saws						
Cranes (Tower)			2		2	
Cranes (Mobile)		2		1	2	
Crawler Tractors						
Crushing/Proc. Equipment						
Excavators	3	2				
Forklifts				1	3	
Generator Sets						
Graders		1				
Off-Highway Tractors						
Other Equipment				1		
Water Truck	1	2				
Pavers						
Paving Equipment						1
Pumps		2	6	2	2	
Plate Compactors						
Rollers						1
Rough Terrain Forklifts				1	3	
Rubber Tired Dozers						
Rubber Tired Loaders		2				
Scrapers						
Signal Boards						1
Skid Steer Loaders						2
Surfacing Equipment						
Sweeper / Scrubbers						
Tractors/Loaders/Backhoes	3	2		1		
Trenchers						2
Welders		2		1		
Other ( )						
Total Pieces	**8**	**17**	**8**	**10**	**24**	**7**

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20-Year Construction Scenario - Equipment Mix

Phase 3

Equipment	Demo	Grading/ Excavation	Mat Foundation	Structure/ Enclosure	Architectural Coatings /Finishes	Paving/ Landscape
Air Compressor	1				6	
Aerial Lift (Electric)				6	6	
Bore/Drill Rig		2				
Cement and Mortar Mixers						
Concrete/Industrial Saws						
Cranes (Tower)			2	2	2	
Cranes (Mobile)		2		3	3	
Crawler Tractors						
Crushing/Proc. Equipment						
Excavators	3	3				
Forklifts				4	4	
Generator Sets						
Graders		1				
Off-Highway Tractors						
Other Equipment				4		
Water Truck	1	2				
Pavers						
Paving Equipment						1
Pumps		2	6	2	2	
Plate Compactors			0			
Rollers						1
Rough Terrain Forklifts				4	4	
Rubber Tired Dozers						
Rubber Tired Loaders		3				
Scrapers						
Signal Boards						1
Skid Steer Loaders						2
Surfacing Equipment						
Sweeper / Scrubbers						
Tractors/Loaders/Backhoes	3	2		1		
Trenchers						2
Welders		2		1		
Other ( )						
Total Pieces	**8**	**19**	**8**	**27**	**27**	**7**

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20-Year Construction Scenario - Equipment Mix

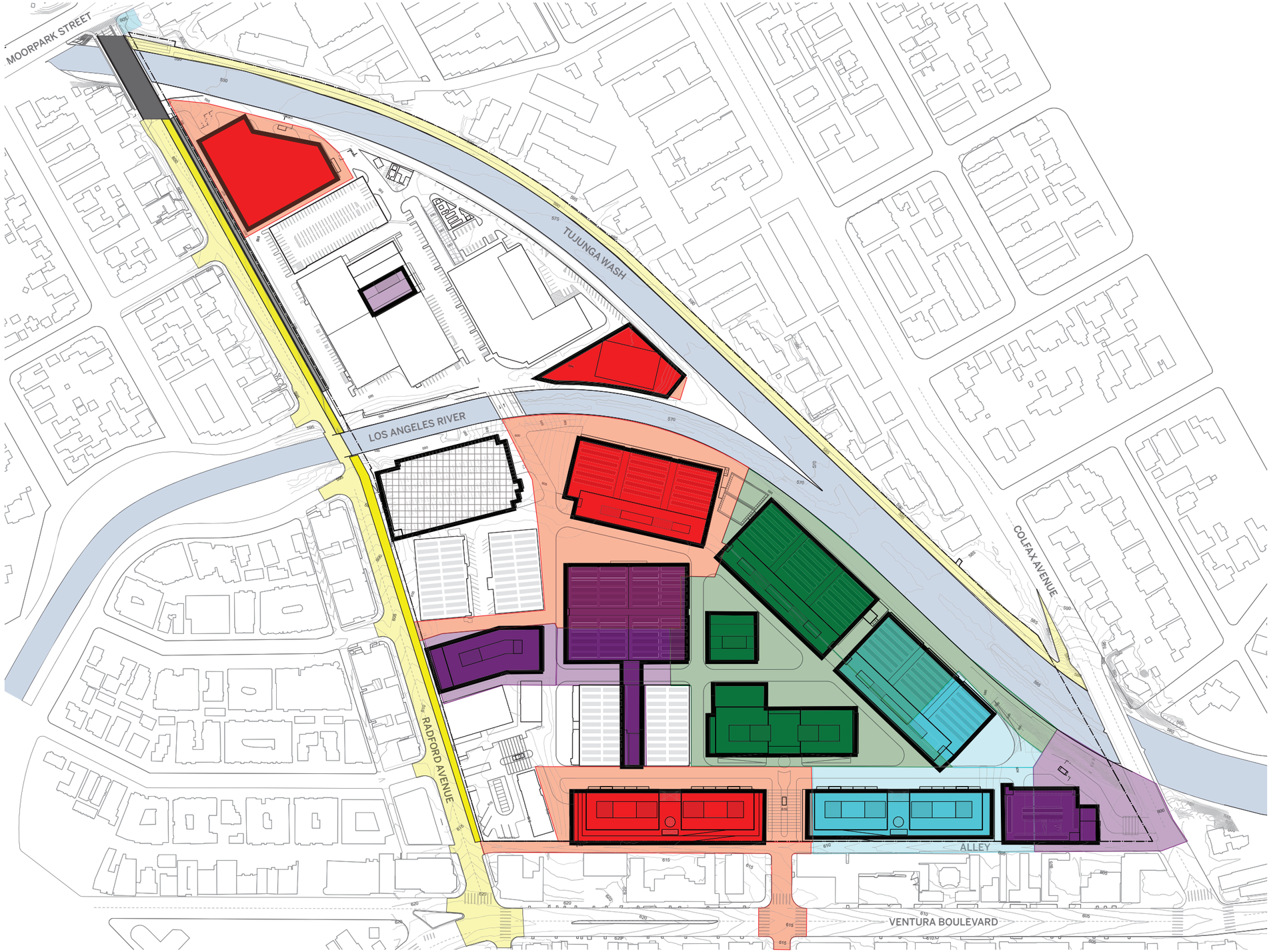
Phase 4

Equipment	Demo	Grading/ Excavation	Mat Foundation	Structure/ Enclosure	Architectural Coatings /Finishes	Paving/ Landscape
Air Compressor	1				1	
Aerial Lift (Electric)				2	1	
Bore/Drill Rig						
Cement and Mortar Mixers						
Concrete/Industrial Saws						
Cranes (Tower)						
Cranes (Mobile)				1		
Crawler Tractors						
Crushing/Proc. Equipment						
Excavators	1	1				
Forklifts				1	1	
Generator Sets						
Graders						
Off-Highway Tractors						
Other Equipment				1		
Water Truck	1	2				
Pavers						
Paving Equipment						1
Pumps		2	2	2		
Plate Compactors						
Rollers						1
Rough Terrain Forklifts				1		
Rubber Tired Dozers						
Rubber Tired Loaders		1				
Scrapers						
Signal Boards						1
Skid Steer Loaders						2
Surfacing Equipment						
Sweeper / Scrubbers						
Tractors/Loaders/Backhoes	1	1		1		
Trenchers						2
Welders		1		1		
Other ( )						
Total Pieces	**4**	**8**	**2**	**10**	**3**	**7**

LEGEND

- STAGES
- PRODUCTION SUPPORT
- PRODUCTION OFFICE
- GENERAL OFFICE
- RETAIL
- PARKING
- SPECIFIC PLAN BOUNDARY
- AREA 1 & AREA 2 LINE
- PV PANELS

- Construction Phase I
- Construction Phase II
- Construction Phase III
- Construction Phase IV



Radford STUDIO CENTER

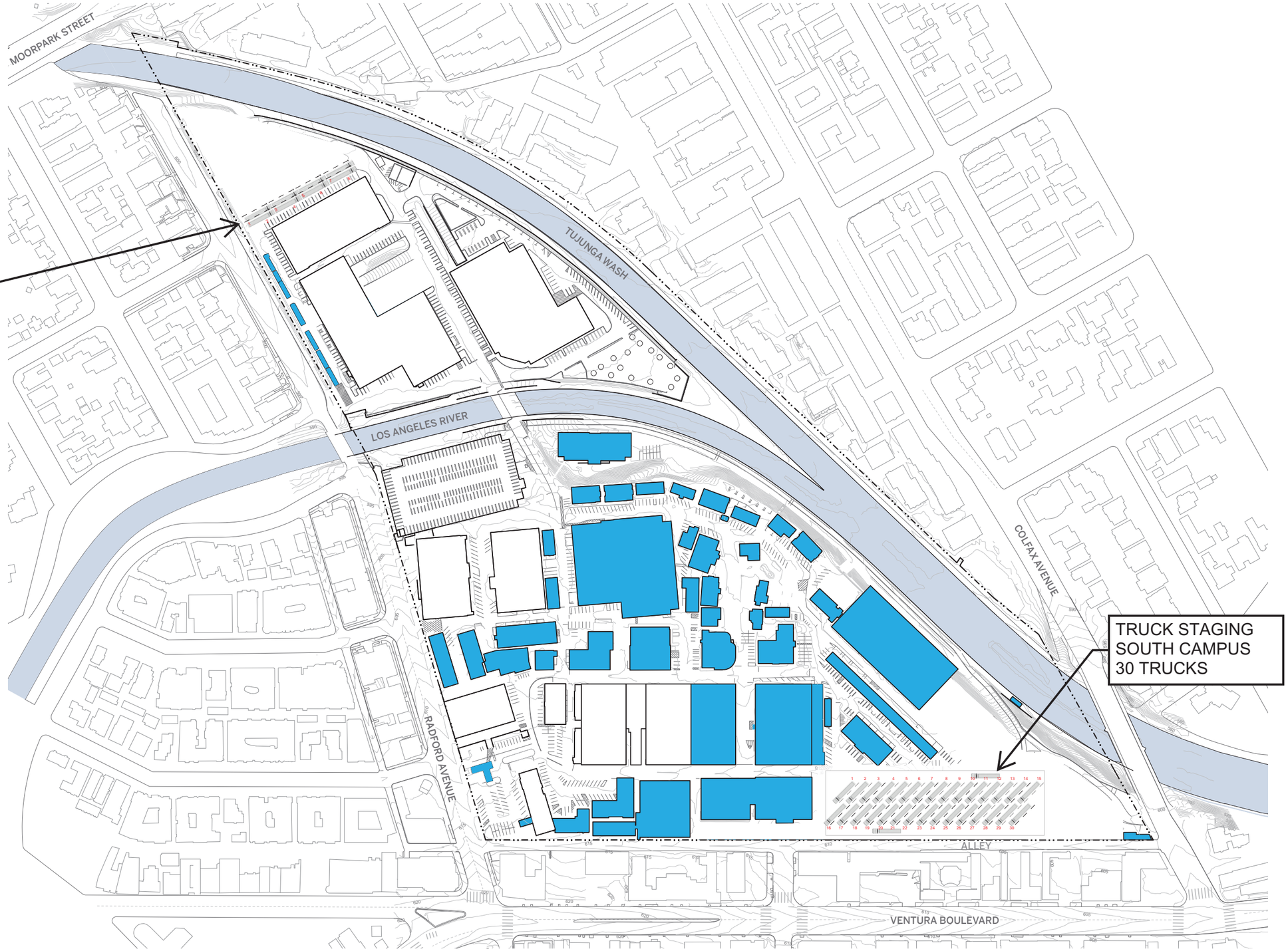
PROJECT ADDRESS
4200 Radford Avenue
Studio City, CA 91604

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ROOF PLAN
1" = 250'

0' 125' 250' N

TRUCK STAGING
NORTH CAMPUS
8 TRUCKS



TRUCK STAGING
SOUTH CAMPUS
30 TRUCKS

Radford STUDIO CENTER

PROJECT ADDRESS
4200 Radford Avenue
Studio City, CA 91604

ON SITE TRUCK STAGING LOCATIONS

AECOM HUNT

Radford Studio Center
4024 Radford Ave.
Los Angeles, California

Proposed On-Site Truck Staging
April 19, 2024
CSK-24-0419-01

Radford

CO Hotspots

CO Hotspots Analysis - Maximum Impacted Intersection

	Laurel Canyon Boulevard and Moorpark Street	
	Future with Project	
Direction	AM	PM
Exisitng Total Intersection Volume	4373	4508
Proposed Total Intersection Volume	5158	5352
Exisitng Max Daily Trips[a]	69,000	70,000
Proposed Max Daily Trips	82,000	83,000
Caltrans K Factor (%)[b]	6.34%	6.52%

[a] Maximum Daily Trips are based on the Caltrans K Factor which is the percentage of the AADT in both directions during the peak hour.

[b] Caltrans K Factor obtained from 101 Freeway Monitoring Station, Postmile 12 which is closest to the Project site. Please refer to: https://dot.ca.gov/programs/traffic-operations/census

Radford Studio Center Project

Draft EIR

Appendix D-3-CalEEMod 2022 Output Files

Construction (Project impacts are evaluated based on the unmitigated results in the Unmitigated CalEEMod output files and the mitigated results in the Mitigated CalEEmod output files.)

- Construction (39-month Scenario)
  - Regional Unmitigated
  - Regional Mitigated
  - Localized Unmitigated
  - Localized Mitigated
- Construction (20-year Scenario)
  - Localized Phase 1-4 Unmitigated
  - Localized Phase 1-4 Mitigated
- Construction (Offsite Improvements)
  - Regional Unmitigated
  - Localized Unmitigated
- Construction (Concurrent Operations)
  - Regional Unmitigated
  - Regional Mitigated

Operations

- Existing Baseline (2023)
- Existing Buildout (2028)
- Project – Conceptual Plan (2028)
- Project – Land Use Exchange (2028)
- Project (Concurrent Construction) - Phase 1-3 Buildout (2028)

CalEEMod Construction outputs assume the peak of each subphase (demolition, grading, building construction) would overlap on the worst-case day. This is due to limitations within the CalEEMod model to account for varying activity (truck trips, construction equipment) which changes on a monthly basis. It should be noted that this is overly conservative and would not be expected to take place under real world conditions.

Radford - Construction (Unmitigated) Custom Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction (Unmitigated)
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	1,201	1000sqft	27.6	1,200,570	10,000	—	—	—
Industrial Park	441	1000sqft	10.1	441,440	10,000	—	—	—

Strip Mall	25.0	1000sqft	0.57	25,000	500	—	—	—
Enclosed Parking with Elevator	3,871	Space	34.8	1,548,400	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	51.9	43.0	228	282	0.98	4.86	116	121	4.48	20.1	24.6	165,127
Mit.	44.1	36.8	170	301	0.98	2.24	116	118	2.10	20.1	22.2	165,127
% Reduced	15%	14%	26%	-7%	—	54%	—	2%	53%	—	10%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	41.0	38.2	168	179	0.77	2.95	75.4	78.3	2.82	12.6	15.5	118,030
Mit.	35.8	34.0	142	191	0.77	1.60	75.4	77.0	1.59	12.6	14.2	118,030
% Reduced	13%	11%	16%	-7%	—	46%	—	2%	44%	—	8%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	28.8	26.9	123	134	0.51	2.52	57.4	59.9	2.34	10.0	12.4	84,744
Mit.	25.3	24.1	92.9	143	0.51	1.14	57.4	58.5	1.08	10.0	11.1	84,744
% Reduced	12%	10%	24%	-7%	—	55%	—	2%	54%	—	10%	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.26	4.91	22.4	24.4	0.09	0.46	10.5	10.9	0.43	1.83	2.26	14,030
Mit.	4.61	4.39	17.0	26.1	0.09	0.21	10.5	10.7	0.20	1.83	2.03	14,030
% Reduced	12%	10%	24%	-7%	—	55%	—	2%	54%	—	10%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	51.9	43.0	228	282	0.98	4.86	116	121	4.48	20.1	24.6	165,127
2027	40.4	37.8	79.9	186	0.25	2.11	46.7	48.8	1.95	8.48	10.4	53,433
2028	39.0	36.6	72.7	159	0.22	1.95	34.4	36.4	1.80	6.29	8.10	43,514
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	13.3	6.14	168	105	0.77	2.95	75.4	78.3	2.82	12.6	15.5	118,030
2026	41.0	38.2	161	179	0.77	2.77	75.4	78.1	2.65	12.6	15.3	116,147
2027	40.3	37.6	82.1	170	0.25	2.11	46.7	48.8	1.95	8.48	10.4	52,098
2028	39.8	37.1	78.0	165	0.25	1.95	46.7	48.6	1.80	8.48	10.3	51,353
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.00	0.52	11.8	8.44	0.05	0.22	5.07	5.29	0.21	0.86	1.07	7,827
2026	22.4	17.8	123	134	0.51	2.52	57.4	59.9	2.34	10.0	12.4	84,755
2027	28.8	26.9	58.7	125	0.18	1.51	32.1	33.6	1.40	5.90	7.29	37,482
2028	27.0	25.4	49.1	102	0.15	1.27	23.7	24.9	1.18	4.37	5.54	29,606
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.18	0.10	2.15	1.54	0.01	0.04	0.93	0.97	0.04	0.16	0.20	1,296
2026	4.09	3.25	22.4	24.4	0.09	0.46	10.5	10.9	0.43	1.83	2.26	14,032

2027	5.26	4.91	10.7	22.8	0.03	0.28	5.86	6.14	0.25	1.08	1.33	6,206
2028	4.92	4.63	8.95	18.6	0.03	0.23	4.32	4.55	0.21	0.80	1.01	4,902

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	44.1	36.8	170	301	0.98	2.24	116	118	2.10	20.1	22.2	165,127
2027	35.5	33.8	43.1	199	0.25	0.60	46.7	47.3	0.58	8.48	9.07	53,433
2028	34.3	32.9	38.5	172	0.22	0.62	34.4	35.0	0.59	6.29	6.89	43,514
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	9.58	3.18	142	111	0.77	1.60	75.4	77.0	1.59	12.6	14.2	118,030
2026	35.8	34.0	137	191	0.77	1.59	75.4	77.0	1.58	12.6	14.2	116,147
2027	35.3	33.7	45.3	183	0.25	0.60	46.7	47.3	0.58	8.48	9.07	52,098
2028	35.1	33.4	43.8	178	0.25	0.62	46.7	47.2	0.59	8.48	9.06	51,353
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.67	0.25	9.56	8.83	0.05	0.11	5.07	5.17	0.10	0.86	0.97	7,827
2026	18.4	14.6	92.9	143	0.51	1.14	57.4	58.5	1.08	10.0	11.1	84,755
2027	25.3	24.1	32.4	134	0.18	0.43	32.1	32.6	0.42	5.90	6.31	37,482
2028	23.7	22.8	25.8	111	0.15	0.37	23.7	24.0	0.35	4.37	4.72	29,606
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.05	1.75	1.61	0.01	0.02	0.93	0.94	0.02	0.16	0.18	1,296
2026	3.35	2.66	17.0	26.1	0.09	0.21	10.5	10.7	0.20	1.83	2.03	14,032
2027	4.61	4.39	5.91	24.5	0.03	0.08	5.86	5.94	0.08	1.08	1.15	6,206
2028	4.33	4.16	4.71	20.2	0.03	0.07	4.32	4.39	0.06	0.80	0.86	4,902

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.73	12.4	0.02	0.35	—	0.35	0.32	—	0.32	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	43.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.57	2.24	< 0.005	0.06	—	0.06	0.06	—	0.06	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.27	3.30	0.00	0.00	0.73	0.73	0.00	0.17	0.17	743
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
Hauling	0.19	0.03	3.36	1.18	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,933
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	136
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
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	528
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	22.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	87.5

3.2. Demolition (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	43.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.04	0.62	2.27	< 0.005	0.01	—	0.01	0.01	—	0.01	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.27	3.30	0.00	0.00	0.73	0.73	0.00	0.17	0.17	743
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
Hauling	0.19	0.03	3.36	1.18	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,933
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	136
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
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	528
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	22.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	87.5

3.3. Demolition (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	2.96	4.40	0.01	0.11	—	0.11	0.10	—	0.10	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.80	< 0.005	0.02	—	0.02	0.02	—	0.02	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.22	3.62	0.00	0.00	0.73	0.73	0.00	0.17	0.17	770
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

Hauling	0.18	0.03	3.10	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,888
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	0.24	3.09	0.00	0.00	0.73	0.73	0.00	0.17	0.17	728
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
Hauling	0.18	0.03	3.23	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,882
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.14	0.00	0.00	0.26	0.26	0.00	0.06	0.06	262
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
Hauling	0.06	0.01	1.16	0.40	0.01	0.01	0.26	0.28	0.01	0.07	0.09	1,022
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	43.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	169

3.4. Demolition (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801

Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.22	4.46	0.01	0.01	—	0.01	0.01	—	0.01	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.22	0.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.22	3.62	0.00	0.00	0.73	0.73	0.00	0.17	0.17	770
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
Hauling	0.18	0.03	3.10	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,888
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	0.24	3.09	0.00	0.00	0.73	0.73	0.00	0.17	0.17	728
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
Hauling	0.18	0.03	3.23	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,882
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.14	0.00	0.00	0.26	0.26	0.00	0.06	0.06	262
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
Hauling	0.06	0.01	1.16	0.40	0.01	0.01	0.26	0.28	0.01	0.07	0.09	1,022
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	43.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	169

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.02	3.37	29.6	39.3	0.07	1.29	—	1.29	1.19	—	1.19	7,067
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.80	2.39	< 0.005	0.08	—	0.08	0.07	—	0.07	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	2.39	2.39	< 0.005	0.24	0.24	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	71.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.44	0.44	< 0.005	0.04	0.04	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.19	2.36	0.00	0.00	0.52	0.52	0.00	0.12	0.12	531
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
Hauling	6.83	1.12	118	41.6	0.65	1.27	26.7	27.9	1.27	7.30	8.57	103,390
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	32.7
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
Hauling	0.42	0.07	7.28	2.51	0.04	0.08	1.60	1.68	0.08	0.44	0.52	6,277
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.42
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
Hauling	0.08	0.01	1.33	0.46	0.01	0.01	0.29	0.31	0.01	0.08	0.09	1,039

3.6. Grading (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.17	8.90	45.4	0.07	0.26	—	0.26	0.25	—	0.25	7,067

Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.54	2.75	< 0.005	0.02	—	0.02	0.01	—	0.01	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	2.39	2.39	< 0.005	0.24	0.24	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	71.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.44	0.44	< 0.005	0.04	0.04	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.19	2.36	0.00	0.00	0.52	0.52	0.00	0.12	0.12	531
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
Hauling	6.83	1.12	118	41.6	0.65	1.27	26.7	27.9	1.27	7.30	8.57	103,390
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	32.7
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
Hauling	0.42	0.07	7.28	2.51	0.04	0.08	1.60	1.68	0.08	0.44	0.52	6,277

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.42
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
Hauling	0.08	0.01	1.33	0.46	0.01	0.01	0.29	0.31	0.01	0.08	0.09	1,039

3.7. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.71	14.8	21.0	0.04	0.62	—	0.62	0.57	—	0.57	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—

Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	21.0	21.0	< 0.005	2.11	2.11	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.70	3.82	0.01	0.11	—	0.11	0.10	—	0.10	625
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	3.84	3.84	< 0.005	0.38	0.39	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	550
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
Hauling	6.25	1.18	109	40.0	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,790
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	520
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
Hauling	6.17	1.12	114	40.3	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,600
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.23	0.00	0.00	0.28	0.28	0.00	0.06	0.06	282
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
Hauling	3.32	0.62	61.6	21.5	0.35	0.68	14.1	14.8	0.68	3.86	4.54	54,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	46.7
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
Hauling	0.61	0.11	11.2	3.92	0.06	0.12	2.57	2.69	0.12	0.70	0.83	8,993

3.8. Grading (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.61	4.71	24.2	0.04	0.13	—	0.13	0.12	—	0.12	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—
Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	21.0	21.0	< 0.005	2.11	2.11	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.11	0.86	4.42	0.01	0.02	—	0.02	0.02	—	0.02	625

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	3.84	3.84	< 0.005	0.38	0.39	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	550
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
Hauling	6.25	1.18	109	40.0	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,790
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	520
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
Hauling	6.17	1.12	114	40.3	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,600
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.23	0.00	0.00	0.28	0.28	0.00	0.06	0.06	282
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
Hauling	3.32	0.62	61.6	21.5	0.35	0.68	14.1	14.8	0.68	3.86	4.54	54,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	46.7
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
Hauling	0.61	0.11	11.2	3.92	0.06	0.12	2.57	2.69	0.12	0.70	0.83	8,993

3.9. Building Exterior (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	19.7	0.04	0.64	—	0.64	0.59	—	0.59	3,868
Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	4.30	4.30	< 0.005	0.43	0.43	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.85	3.60	0.01	0.12	—	0.12	0.11	—	0.11	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.03	3.19	53.1	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,302
Vendor	0.46	0.19	7.08	3.43	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,720
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.01	3.58	45.3	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,687
Vendor	0.46	0.18	7.40	3.51	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,706
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.61	2.10	25.5	0.00	0.00	5.69	5.69	0.00	1.33	1.33	5,843
Vendor	0.25	0.10	4.01	1.87	0.02	0.05	0.94	0.99	0.02	0.26	0.28	3,612
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.38	4.66	0.00	0.00	1.04	1.04	0.00	0.24	0.24	967
Vendor	0.05	0.02	0.73	0.34	< 0.005	0.01	0.17	0.18	< 0.005	0.05	0.05	598
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

3.10. Building Exterior (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.46	3.49	23.6	0.04	0.10	—	0.10	0.10	—	0.10	3,868
Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	4.30	4.30	< 0.005	0.43	0.43	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.08	0.64	4.30	0.01	0.02	—	0.02	0.02	—	0.02	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.03	3.19	53.1	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,302
Vendor	0.46	0.19	7.08	3.43	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,720
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.01	3.58	45.3	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,687
Vendor	0.46	0.18	7.40	3.51	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,706
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.61	2.10	25.5	0.00	0.00	5.69	5.69	0.00	1.33	1.33	5,843
Vendor	0.25	0.10	4.01	1.87	0.02	0.05	0.94	0.99	0.02	0.26	0.28	3,612
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.38	4.66	0.00	0.00	1.04	1.04	0.00	0.24	0.24	967
Vendor	0.05	0.02	0.73	0.34	< 0.005	0.01	0.17	0.18	< 0.005	0.05	0.05	598
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

3.11. Building Exterior (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	19.7	26.1	0.05	0.76	—	0.76	0.69	—	0.69	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	5.71	5.71	< 0.005	0.57	0.57	192
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.59	4.76	0.01	0.14	—	0.14	0.13	—	0.13	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	1.04	1.04	< 0.005	0.10	0.10	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.31	2.92	2.84	49.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,086
Vendor	0.41	0.19	6.78	3.23	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,581
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.27	2.86	3.54	41.8	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,477
Vendor	0.40	0.18	7.05	3.30	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,568
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.34	2.05	2.53	31.4	0.00	0.00	7.56	7.56	0.00	1.77	1.77	7,603
Vendor	0.30	0.13	5.07	2.33	0.03	0.03	1.24	1.28	0.03	0.34	0.38	4,695
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.37	0.46	5.73	0.00	0.00	1.38	1.38	0.00	0.32	0.32	1,259
Vendor	0.05	0.02	0.92	0.43	0.01	0.01	0.23	0.23	0.01	0.06	0.07	777
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

3.12. Building Exterior (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.61	4.63	31.3	0.05	0.13	—	0.13	0.13	—	0.13	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	5.71	5.71	< 0.005	0.57	0.57	192
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.11	0.85	5.71	0.01	0.02	—	0.02	0.02	—	0.02	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	1.04	1.04	< 0.005	0.10	0.10	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.31	2.92	2.84	49.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,086
Vendor	0.41	0.19	6.78	3.23	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,581
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.27	2.86	3.54	41.8	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,477
Vendor	0.40	0.18	7.05	3.30	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,568
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.34	2.05	2.53	31.4	0.00	0.00	7.56	7.56	0.00	1.77	1.77	7,603
Vendor	0.30	0.13	5.07	2.33	0.03	0.03	1.24	1.28	0.03	0.34	0.38	4,695
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.37	0.46	5.73	0.00	0.00	1.38	1.38	0.00	0.32	0.32	1,259
Vendor	0.05	0.02	0.92	0.43	0.01	0.01	0.23	0.23	0.01	0.06	0.07	777
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

3.13. Building Exterior (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.15	1.80	17.2	23.9	0.04	0.63	—	0.63	0.58	—	0.58	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	5.24	5.24	< 0.005	0.52	0.53	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.13	4.36	0.01	0.12	—	0.12	0.11	—	0.11	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.96	0.96	< 0.005	0.10	0.10	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.20	2.81	2.80	46.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,878
Vendor	0.41	0.15	6.47	3.12	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,430
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.18	2.79	3.19	39.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,292
Vendor	0.40	0.14	6.75	3.15	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,420
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.07	1.82	2.08	27.0	0.00	0.00	6.94	6.94	0.00	1.62	1.62	6,854
Vendor	0.27	0.09	4.45	2.04	0.03	0.03	1.14	1.17	0.03	0.32	0.35	4,212
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.33	0.38	4.93	0.00	0.00	1.27	1.27	0.00	0.30	0.30	1,135
Vendor	0.05	0.02	0.81	0.37	0.01	0.01	0.21	0.21	0.01	0.06	0.06	697
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

3.14. Building Exterior (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.56	4.25	28.7	0.04	0.12	—	0.12	0.12	—	0.12	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	5.24	5.24	< 0.005	0.52	0.53	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.10	0.77	5.24	0.01	0.02	—	0.02	0.02	—	0.02	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.96	0.96	< 0.005	0.10	0.10	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.20	2.81	2.80	46.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,878
Vendor	0.41	0.15	6.47	3.12	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,430
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.18	2.79	3.19	39.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,292
Vendor	0.40	0.14	6.75	3.15	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,420
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.07	1.82	2.08	27.0	0.00	0.00	6.94	6.94	0.00	1.62	1.62	6,854
Vendor	0.27	0.09	4.45	2.04	0.03	0.03	1.14	1.17	0.03	0.32	0.35	4,212
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.33	0.38	4.93	0.00	0.00	1.27	1.27	0.00	0.30	0.30	1,135
Vendor	0.05	0.02	0.81	0.37	0.01	0.01	0.21	0.21	0.01	0.06	0.06	697
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

3.15. Foundation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	1.96	1.96	< 0.005	0.20	0.20	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.36	0.36	< 0.005	0.04	0.04	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.68	1.77	29.5	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,270
Vendor	0.32	0.13	4.81	2.33	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,567
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.99	25.1	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,929
Vendor	0.31	0.12	5.03	2.38	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,557
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.60	0.78	9.47	0.00	0.00	2.11	2.11	0.00	0.49	0.49	2,169
Vendor	0.11	0.05	1.82	0.85	0.01	0.02	0.43	0.45	0.01	0.12	0.13	1,642
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.73	0.00	0.00	0.39	0.39	0.00	0.09	0.09	359
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	272
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

3.16. Foundation (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	1.96	1.96	< 0.005	0.20	0.20	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.36	0.36	< 0.005	0.04	0.04	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.68	1.77	29.5	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,270
Vendor	0.32	0.13	4.81	2.33	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,567
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.99	25.1	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,929
Vendor	0.31	0.12	5.03	2.38	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,557
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.60	0.78	9.47	0.00	0.00	2.11	2.11	0.00	0.49	0.49	2,169
Vendor	0.11	0.05	1.82	0.85	0.01	0.02	0.43	0.45	0.01	0.12	0.13	1,642
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.73	0.00	0.00	0.39	0.39	0.00	0.09	0.09	359
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	272
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

3.17. Foundation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	3.88	3.88	< 0.005	0.39	0.39	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.71	0.71	< 0.005	0.07	0.07	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.62	1.57	27.4	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,150
Vendor	0.28	0.13	4.61	2.19	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,472
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.81	1.59	1.97	23.2	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,812
Vendor	0.27	0.12	4.79	2.25	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,464
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.30	1.13	1.40	17.4	0.00	0.00	4.19	4.19	0.00	0.98	0.98	4,217
Vendor	0.20	0.09	3.44	1.59	0.02	0.02	0.84	0.87	0.02	0.23	0.26	3,191
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.26	3.18	0.00	0.00	0.77	0.77	0.00	0.18	0.18	698
Vendor	0.04	0.02	0.63	0.29	< 0.005	< 0.005	0.15	0.16	< 0.005	0.04	0.05	528
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

3.18. Foundation (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	3.88	3.88	< 0.005	0.39	0.39	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.71	0.71	< 0.005	0.07	0.07	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.62	1.57	27.4	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,150
Vendor	0.28	0.13	4.61	2.19	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,472
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.81	1.59	1.97	23.2	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,812
Vendor	0.27	0.12	4.79	2.25	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,464
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.30	1.13	1.40	17.4	0.00	0.00	4.19	4.19	0.00	0.98	0.98	4,217
Vendor	0.20	0.09	3.44	1.59	0.02	0.02	0.84	0.87	0.02	0.23	0.26	3,191
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.26	3.18	0.00	0.00	0.77	0.77	0.00	0.18	0.18	698
Vendor	0.04	0.02	0.63	0.29	< 0.005	< 0.005	0.15	0.16	< 0.005	0.04	0.05	528
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

3.19. Foundation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.76	1.55	1.77	21.9	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,709
Vendor	0.27	0.09	4.59	2.14	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,363
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.20	2.64	0.00	0.00	0.68	0.68	0.00	0.16	0.16	670
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	504
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.12	0.12	0.00	0.03	0.03	111
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	83.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Foundation (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.76	1.55	1.77	21.9	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,709

Vendor	0.27	0.09	4.59	2.14	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,363
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.20	2.64	0.00	0.00	0.68	0.68	0.00	0.16	0.16	670
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	504
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.12	0.12	0.00	0.03	0.03	111
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	83.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Paving (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.99	0.00	0.00	0.23	0.23	0.00	0.05	0.05	232
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.84	0.00	0.00	0.23	0.23	0.00	0.05	0.05	219
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	93.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	15.4
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

3.22. Paving (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.99	0.00	0.00	0.23	0.23	0.00	0.05	0.05	232
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.84	0.00	0.00	0.23	0.23	0.00	0.05	0.05	219
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	93.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	15.4
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

3.23. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266

Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	165
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.21	11.5	0.02	0.32	—	0.32	0.29	—	0.29	2,256
Architectural Coatings	8.95	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	1.73	1.73	< 0.005	0.17	0.17	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.68	2.10	< 0.005	0.06	—	0.06	0.05	—	0.05	374
Architectural Coatings	1.63	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.32	0.32	< 0.005	0.03	0.03	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.81	1.91	31.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,753
Vendor	0.28	0.12	4.26	2.06	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,045
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.80	2.14	27.1	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,386

Vendor	0.27	0.11	4.46	2.11	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,037
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.73	0.64	0.84	10.2	0.00	0.00	2.28	2.28	0.00	0.53	0.53	2,336
Vendor	0.10	0.04	1.61	0.75	0.01	0.02	0.38	0.40	0.01	0.10	0.11	1,455
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.15	1.86	0.00	0.00	0.42	0.42	0.00	0.10	0.10	387
Vendor	0.02	0.01	0.29	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	241
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

3.24. Architectural Coating (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	165

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.29	3.20	13.5	0.02	0.06	—	0.06	0.06	—	0.06	2,256
Architectural Coatings	8.95	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	1.73	1.73	< 0.005	0.17	0.17	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.58	2.46	< 0.005	0.01	—	0.01	0.01	—	0.01	374
Architectural Coatings	1.63	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.32	0.32	< 0.005	0.03	0.03	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.81	1.91	31.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,753
Vendor	0.28	0.12	4.26	2.06	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,045
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.80	2.14	27.1	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,386
Vendor	0.27	0.11	4.46	2.11	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,037
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.73	0.64	0.84	10.2	0.00	0.00	2.28	2.28	0.00	0.53	0.53	2,336
Vendor	0.10	0.04	1.61	0.75	0.01	0.02	0.38	0.40	0.01	0.10	0.11	1,455
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.15	1.86	0.00	0.00	0.42	0.42	0.00	0.10	0.10	387

Vendor	0.02	0.01	0.29	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	241
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

3.25. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.95	17.6	22.8	0.04	0.57	—	0.57	0.53	—	0.53	4,475
Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.21	4.15	0.01	0.10	—	0.10	0.10	—	0.10	741

Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.98	1.74	1.69	29.5	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,624
Vendor	0.25	0.12	4.08	1.94	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,961
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.95	1.71	2.12	25.0	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,260
Vendor	0.24	0.11	4.24	1.99	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,954
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.40	1.22	1.51	18.8	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,543
Vendor	0.18	0.08	3.05	1.40	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,826
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	3.42	0.00	0.00	0.82	0.82	0.00	0.19	0.19	752
Vendor	0.03	0.01	0.56	0.26	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	468
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

3.26. Architectural Coating (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,475
Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.98	1.74	1.69	29.5	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,624
Vendor	0.25	0.12	4.08	1.94	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,961

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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.95	1.71	2.12	25.0	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,260
Vendor	0.24	0.11	4.24	1.99	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,954
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.40	1.22	1.51	18.8	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,543
Vendor	0.18	0.08	3.05	1.40	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,826
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	3.42	0.00	0.00	0.82	0.82	0.00	0.19	0.19	752
Vendor	0.03	0.01	0.56	0.26	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	468
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

3.27. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.24	1.87	16.7	22.7	0.04	0.51	—	0.51	0.47	—	0.47	4,476
Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.04	4.14	0.01	0.09	—	0.09	0.09	—	0.09	741
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.91	1.68	1.67	27.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,500
Vendor	0.25	0.09	3.90	1.88	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,871
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.91	23.6	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,150
Vendor	0.24	0.08	4.06	1.89	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,865
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Worker	1.35	1.18	1.35	17.6	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,462
Vendor	0.18	0.06	2.92	1.34	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,762
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.25	3.21	0.00	0.00	0.82	0.82	0.00	0.19	0.19	739
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	457
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

3.28. Architectural Coating (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,476

Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.91	1.68	1.67	27.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,500
Vendor	0.25	0.09	3.90	1.88	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,871
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.91	23.6	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,150
Vendor	0.24	0.08	4.06	1.89	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,865
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.35	1.18	1.35	17.6	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,462
Vendor	0.18	0.06	2.92	1.34	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,762
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.25	3.21	0.00	0.00	0.82	0.82	0.00	0.19	0.19	739
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	457
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	6/30/2026	5.00	195	—
Grading	Grading	12/1/2025	9/30/2026	5.00	218	—
Building Exterior	Building Construction	4/1/2026	11/30/2028	5.00	697	—
Foundation	Building Construction	7/1/2026	2/28/2028	5.00	434	—
Paving	Paving	7/1/2028	11/30/2028	5.00	109	—
Architectural Coating	Architectural Coating	7/1/2026	12/30/2028	5.00	653	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42

Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	56.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	24.0	34.0	HHDT
Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	846	34.0	HHDT

Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	822	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	220	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	491	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	124	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	456	18.5	LDA,LDT1,LDT2
Foundation	Vendor	140	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	56.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	24.0	34.0	HHDT

Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	846	34.0	HHDT
Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	822	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	220	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	491	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	124	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	456	18.5	LDA,LDT1,LDT2
Foundation	Vendor	140	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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	2,568,806	841,093	91,055

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	976,000	—
Grading	55,000	935,000	109	0.00	—
Paving	0.00	0.00	0.00	0.00	34.8

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%

Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	34.8	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01
2026	5,352	690	0.05	0.01
2027	5,352	690	0.05	0.01
2028	5,352	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Characteristics: Utility Information	SB100 Adjustment for Year 2023
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Radford - Construction (MItigated) Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction (MItigated)
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	1,201	1000sqft	27.6	1,200,570	10,000	—	—	—
Industrial Park	441	1000sqft	10.1	441,440	10,000	—	—	—

Strip Mall	25.0	1000sqft	0.57	25,000	500	—	—	—
Enclosed Parking with Elevator	3,871	Space	34.8	1,548,400	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	51.9	43.0	228	282	0.98	4.86	70.4	75.3	4.48	15.6	20.1	165,127
Mit.	44.1	36.8	170	301	0.98	2.24	70.4	72.6	2.10	15.6	17.7	165,127
% Reduced	15%	14%	26%	-7%	—	54%	—	3%	53%	—	12%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	41.0	38.2	168	179	0.77	2.95	41.2	44.1	2.82	9.24	12.1	118,030
Mit.	35.8	34.0	142	191	0.77	1.60	41.2	42.8	1.59	9.24	10.8	118,030
% Reduced	13%	11%	16%	-7%	—	46%	—	3%	44%	—	10%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	28.8	26.9	123	134	0.51	2.52	35.3	37.8	2.34	7.83	10.2	84,744
Mit.	25.3	24.1	92.9	143	0.51	1.14	35.3	36.5	1.08	7.83	8.91	84,744
% Reduced	12%	10%	24%	-7%	—	55%	—	4%	54%	—	12%	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.26	4.91	22.4	24.4	0.09	0.46	6.44	6.90	0.43	1.43	1.86	14,030
Mit.	4.61	4.39	17.0	26.1	0.09	0.21	6.44	6.65	0.20	1.43	1.63	14,030
% Reduced	12%	10%	24%	-7%	—	55%	—	4%	54%	—	12%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	51.9	43.0	228	282	0.98	4.86	70.4	75.3	4.48	15.6	20.1	165,127
2027	40.4	37.8	79.9	186	0.25	2.11	34.1	36.2	1.95	7.24	9.19	53,433
2028	39.0	36.6	72.7	159	0.22	1.95	25.3	27.3	1.80	5.39	7.19	43,514
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	13.3	6.14	168	105	0.77	2.95	41.2	44.1	2.82	9.24	12.1	118,030
2026	41.0	38.2	161	179	0.77	2.77	41.2	44.0	2.65	9.24	11.9	116,147
2027	40.3	37.6	82.1	170	0.25	2.11	34.1	36.2	1.95	7.24	9.19	52,098
2028	39.8	37.1	78.0	165	0.25	1.95	34.1	36.1	1.80	7.24	9.02	51,353
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.00	0.52	11.8	8.44	0.05	0.22	3.03	3.25	0.21	0.66	0.87	7,827
2026	22.4	17.8	123	134	0.51	2.52	35.3	37.8	2.34	7.83	10.2	84,755
2027	28.8	26.9	58.7	125	0.18	1.51	23.8	25.3	1.40	5.06	6.46	37,482
2028	27.0	25.4	49.1	102	0.15	1.27	17.6	18.9	1.18	3.76	4.94	29,606
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.18	0.10	2.15	1.54	0.01	0.04	0.55	0.59	0.04	0.12	0.16	1,296
2026	4.09	3.25	22.4	24.4	0.09	0.46	6.44	6.90	0.43	1.43	1.86	14,032

2027	5.26	4.91	10.7	22.8	0.03	0.28	4.34	4.61	0.25	0.92	1.18	6,206
2028	4.92	4.63	8.95	18.6	0.03	0.23	3.21	3.45	0.21	0.69	0.90	4,902

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	44.1	36.8	170	301	0.98	2.24	70.4	72.6	2.10	15.6	17.7	165,127
2027	35.5	33.8	43.1	199	0.25	0.60	34.1	34.7	0.58	7.24	7.82	53,433
2028	34.3	32.9	38.5	172	0.22	0.62	25.3	26.0	0.59	5.39	5.99	43,514
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	9.58	3.18	142	111	0.77	1.60	41.2	42.8	1.59	9.24	10.8	118,030
2026	35.8	34.0	137	191	0.77	1.59	41.2	42.8	1.58	9.24	10.8	116,147
2027	35.3	33.7	45.3	183	0.25	0.60	34.1	34.7	0.58	7.24	7.82	52,098
2028	35.1	33.4	43.8	178	0.25	0.62	34.1	34.7	0.59	7.24	7.82	51,353
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.67	0.25	9.56	8.83	0.05	0.11	3.03	3.13	0.10	0.66	0.76	7,827
2026	18.4	14.6	92.9	143	0.51	1.14	35.3	36.5	1.08	7.83	8.91	84,755
2027	25.3	24.1	32.4	134	0.18	0.43	23.8	24.2	0.42	5.06	5.48	37,482
2028	23.7	22.8	25.8	111	0.15	0.37	17.6	18.0	0.35	3.76	4.12	29,606
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.12	0.05	1.75	1.61	0.01	0.02	0.55	0.57	0.02	0.12	0.14	1,296
2026	3.35	2.66	17.0	26.1	0.09	0.21	6.44	6.65	0.20	1.43	1.63	14,032
2027	4.61	4.39	5.91	24.5	0.03	0.08	4.34	4.41	0.08	0.92	1.00	6,206
2028	4.33	4.16	4.71	20.2	0.03	0.07	3.21	3.28	0.06	0.69	0.75	4,902

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.73	12.4	0.02	0.35	—	0.35	0.32	—	0.32	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	43.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.57	2.24	< 0.005	0.06	—	0.06	0.06	—	0.06	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.27	3.30	0.00	0.00	0.73	0.73	0.00	0.17	0.17	743
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
Hauling	0.19	0.03	3.36	1.18	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,933
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	136
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
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	528
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	22.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	87.5

3.2. Demolition (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	43.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.04	0.62	2.27	< 0.005	0.01	—	0.01	0.01	—	0.01	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.27	3.30	0.00	0.00	0.73	0.73	0.00	0.17	0.17	743
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
Hauling	0.19	0.03	3.36	1.18	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,933
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.62	0.00	0.00	0.13	0.13	0.00	0.03	0.03	136
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
Hauling	0.04	0.01	0.61	0.21	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	528
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01	22.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	87.5

3.3. Demolition (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	2.96	4.40	0.01	0.11	—	0.11	0.10	—	0.10	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.80	< 0.005	0.02	—	0.02	0.02	—	0.02	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.22	3.62	0.00	0.00	0.73	0.73	0.00	0.17	0.17	770
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

Hauling	0.18	0.03	3.10	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,888
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	0.24	3.09	0.00	0.00	0.73	0.73	0.00	0.17	0.17	728
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
Hauling	0.18	0.03	3.23	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,882
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.14	0.00	0.00	0.26	0.26	0.00	0.06	0.06	262
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
Hauling	0.06	0.01	1.16	0.40	0.01	0.01	0.26	0.28	0.01	0.07	0.09	1,022
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	43.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	169

3.4. Demolition (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801

Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.22	4.46	0.01	0.01	—	0.01	0.01	—	0.01	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.22	0.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.22	3.62	0.00	0.00	0.73	0.73	0.00	0.17	0.17	770
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
Hauling	0.18	0.03	3.10	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,888
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	0.24	3.09	0.00	0.00	0.73	0.73	0.00	0.17	0.17	728
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
Hauling	0.18	0.03	3.23	1.14	0.02	0.04	0.76	0.79	0.04	0.21	0.24	2,882
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.14	0.00	0.00	0.26	0.26	0.00	0.06	0.06	262
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
Hauling	0.06	0.01	1.16	0.40	0.01	0.01	0.26	0.28	0.01	0.07	0.09	1,022
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	43.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	169

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.02	3.37	29.6	39.3	0.07	1.29	—	1.29	1.19	—	1.19	7,067
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.80	2.39	< 0.005	0.08	—	0.08	0.07	—	0.07	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	0.50	0.51	< 0.005	0.05	0.05	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	71.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.19	2.36	0.00	0.00	0.52	0.52	0.00	0.12	0.12	531
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
Hauling	6.83	1.12	118	41.6	0.65	1.27	26.7	27.9	1.27	7.30	8.57	103,390
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	32.7
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
Hauling	0.42	0.07	7.28	2.51	0.04	0.08	1.60	1.68	0.08	0.44	0.52	6,277
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.42
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
Hauling	0.08	0.01	1.33	0.46	0.01	0.01	0.29	0.31	0.01	0.08	0.09	1,039

3.6. Grading (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.17	8.90	45.4	0.07	0.26	—	0.26	0.25	—	0.25	7,067

Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.54	2.75	< 0.005	0.02	—	0.02	0.01	—	0.01	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	0.50	0.51	< 0.005	0.05	0.05	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	71.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.19	2.36	0.00	0.00	0.52	0.52	0.00	0.12	0.12	531
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
Hauling	6.83	1.12	118	41.6	0.65	1.27	26.7	27.9	1.27	7.30	8.57	103,390
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	32.7
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
Hauling	0.42	0.07	7.28	2.51	0.04	0.08	1.60	1.68	0.08	0.44	0.52	6,277

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.42
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
Hauling	0.08	0.01	1.33	0.46	0.01	0.01	0.29	0.31	0.01	0.08	0.09	1,039

3.7. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.71	14.8	21.0	0.04	0.62	—	0.62	0.57	—	0.57	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—

Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	4.44	4.45	< 0.005	0.45	0.46	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.70	3.82	0.01	0.11	—	0.11	0.10	—	0.10	625
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	0.81	0.81	< 0.005	0.08	0.08	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	550
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
Hauling	6.25	1.18	109	40.0	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,790
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	520
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
Hauling	6.17	1.12	114	40.3	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,600
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.23	0.00	0.00	0.28	0.28	0.00	0.06	0.06	282
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
Hauling	3.32	0.62	61.6	21.5	0.35	0.68	14.1	14.8	0.68	3.86	4.54	54,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	46.7
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
Hauling	0.61	0.11	11.2	3.92	0.06	0.12	2.57	2.69	0.12	0.70	0.83	8,993

3.8. Grading (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.61	4.71	24.2	0.04	0.13	—	0.13	0.12	—	0.12	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—
Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	4.44	4.45	< 0.005	0.45	0.46	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.11	0.86	4.42	0.01	0.02	—	0.02	0.02	—	0.02	625

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	0.81	0.81	< 0.005	0.08	0.08	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	2.58	0.00	0.00	0.52	0.52	0.00	0.12	0.12	550
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
Hauling	6.25	1.18	109	40.0	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,790
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.20	0.00	0.00	0.52	0.52	0.00	0.12	0.12	520
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
Hauling	6.17	1.12	114	40.3	0.65	1.27	26.7	27.9	1.27	7.30	8.57	101,600
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.23	0.00	0.00	0.28	0.28	0.00	0.06	0.06	282
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
Hauling	3.32	0.62	61.6	21.5	0.35	0.68	14.1	14.8	0.68	3.86	4.54	54,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	46.7
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
Hauling	0.61	0.11	11.2	3.92	0.06	0.12	2.57	2.69	0.12	0.70	0.83	8,993

3.9. Building Exterior (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	19.7	0.04	0.64	—	0.64	0.59	—	0.59	3,868
Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	1.54	1.54	< 0.005	0.16	0.16	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.85	3.60	0.01	0.12	—	0.12	0.11	—	0.11	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.03	3.19	53.1	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,302
Vendor	0.46	0.19	7.08	3.43	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,720
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.01	3.58	45.3	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,687
Vendor	0.46	0.18	7.40	3.51	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,706
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.61	2.10	25.5	0.00	0.00	5.69	5.69	0.00	1.33	1.33	5,843
Vendor	0.25	0.10	4.01	1.87	0.02	0.05	0.94	0.99	0.02	0.26	0.28	3,612
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.38	4.66	0.00	0.00	1.04	1.04	0.00	0.24	0.24	967
Vendor	0.05	0.02	0.73	0.34	< 0.005	0.01	0.17	0.18	< 0.005	0.05	0.05	598
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

3.10. Building Exterior (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.46	3.49	23.6	0.04	0.10	—	0.10	0.10	—	0.10	3,868
Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	1.54	1.54	< 0.005	0.16	0.16	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.08	0.64	4.30	0.01	0.02	—	0.02	0.02	—	0.02	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.03	3.19	53.1	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,302
Vendor	0.46	0.19	7.08	3.43	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,720
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.42	3.01	3.58	45.3	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,687
Vendor	0.46	0.18	7.40	3.51	0.05	0.09	1.76	1.86	0.05	0.49	0.53	6,706
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.61	2.10	25.5	0.00	0.00	5.69	5.69	0.00	1.33	1.33	5,843
Vendor	0.25	0.10	4.01	1.87	0.02	0.05	0.94	0.99	0.02	0.26	0.28	3,612
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.38	4.66	0.00	0.00	1.04	1.04	0.00	0.24	0.24	967
Vendor	0.05	0.02	0.73	0.34	< 0.005	0.01	0.17	0.18	< 0.005	0.05	0.05	598
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

3.11. Building Exterior (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	19.7	26.1	0.05	0.76	—	0.76	0.69	—	0.69	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	2.04	2.04	< 0.005	0.21	0.21	192
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.59	4.76	0.01	0.14	—	0.14	0.13	—	0.13	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.31	2.92	2.84	49.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,086
Vendor	0.41	0.19	6.78	3.23	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,581
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.27	2.86	3.54	41.8	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,477
Vendor	0.40	0.18	7.05	3.30	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,568
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.34	2.05	2.53	31.4	0.00	0.00	7.56	7.56	0.00	1.77	1.77	7,603
Vendor	0.30	0.13	5.07	2.33	0.03	0.03	1.24	1.28	0.03	0.34	0.38	4,695
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.37	0.46	5.73	0.00	0.00	1.38	1.38	0.00	0.32	0.32	1,259
Vendor	0.05	0.02	0.92	0.43	0.01	0.01	0.23	0.23	0.01	0.06	0.07	777
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

3.12. Building Exterior (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.61	4.63	31.3	0.05	0.13	—	0.13	0.13	—	0.13	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	2.04	2.04	< 0.005	0.21	0.21	192
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.11	0.85	5.71	0.01	0.02	—	0.02	0.02	—	0.02	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.31	2.92	2.84	49.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	11,086
Vendor	0.41	0.19	6.78	3.23	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,581
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.27	2.86	3.54	41.8	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,477
Vendor	0.40	0.18	7.05	3.30	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,568
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.34	2.05	2.53	31.4	0.00	0.00	7.56	7.56	0.00	1.77	1.77	7,603
Vendor	0.30	0.13	5.07	2.33	0.03	0.03	1.24	1.28	0.03	0.34	0.38	4,695
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.37	0.46	5.73	0.00	0.00	1.38	1.38	0.00	0.32	0.32	1,259
Vendor	0.05	0.02	0.92	0.43	0.01	0.01	0.23	0.23	0.01	0.06	0.07	777
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

3.13. Building Exterior (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.15	1.80	17.2	23.9	0.04	0.63	—	0.63	0.58	—	0.58	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	1.87	1.87	< 0.005	0.19	0.19	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.13	4.36	0.01	0.12	—	0.12	0.11	—	0.11	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.03	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.20	2.81	2.80	46.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,878
Vendor	0.41	0.15	6.47	3.12	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,430
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.18	2.79	3.19	39.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,292
Vendor	0.40	0.14	6.75	3.15	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,420
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.07	1.82	2.08	27.0	0.00	0.00	6.94	6.94	0.00	1.62	1.62	6,854
Vendor	0.27	0.09	4.45	2.04	0.03	0.03	1.14	1.17	0.03	0.32	0.35	4,212
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.33	0.38	4.93	0.00	0.00	1.27	1.27	0.00	0.30	0.30	1,135
Vendor	0.05	0.02	0.81	0.37	0.01	0.01	0.21	0.21	0.01	0.06	0.06	697
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

3.14. Building Exterior (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.56	4.25	28.7	0.04	0.12	—	0.12	0.12	—	0.12	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	1.87	1.87	< 0.005	0.19	0.19	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.10	0.77	5.24	0.01	0.02	—	0.02	0.02	—	0.02	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.03	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.20	2.81	2.80	46.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,878
Vendor	0.41	0.15	6.47	3.12	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,430
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.18	2.79	3.19	39.4	0.00	0.00	10.7	10.7	0.00	2.52	2.52	10,292
Vendor	0.40	0.14	6.75	3.15	0.05	0.05	1.76	1.81	0.05	0.49	0.53	6,420
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.07	1.82	2.08	27.0	0.00	0.00	6.94	6.94	0.00	1.62	1.62	6,854
Vendor	0.27	0.09	4.45	2.04	0.03	0.03	1.14	1.17	0.03	0.32	0.35	4,212
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.33	0.38	4.93	0.00	0.00	1.27	1.27	0.00	0.30	0.30	1,135
Vendor	0.05	0.02	0.81	0.37	0.01	0.01	0.21	0.21	0.01	0.06	0.06	697
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

3.15. Foundation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	0.70	0.70	< 0.005	0.07	0.07	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.68	1.77	29.5	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,270
Vendor	0.32	0.13	4.81	2.33	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,567
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.99	25.1	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,929
Vendor	0.31	0.12	5.03	2.38	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,557
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.60	0.78	9.47	0.00	0.00	2.11	2.11	0.00	0.49	0.49	2,169
Vendor	0.11	0.05	1.82	0.85	0.01	0.02	0.43	0.45	0.01	0.12	0.13	1,642
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.73	0.00	0.00	0.39	0.39	0.00	0.09	0.09	359
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	272
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

3.16. Foundation (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	0.70	0.70	< 0.005	0.07	0.07	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.68	1.77	29.5	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,270
Vendor	0.32	0.13	4.81	2.33	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,567
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.99	25.1	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,929
Vendor	0.31	0.12	5.03	2.38	0.03	0.06	1.20	1.26	0.03	0.33	0.36	4,557
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.68	0.60	0.78	9.47	0.00	0.00	2.11	2.11	0.00	0.49	0.49	2,169
Vendor	0.11	0.05	1.82	0.85	0.01	0.02	0.43	0.45	0.01	0.12	0.13	1,642
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.73	0.00	0.00	0.39	0.39	0.00	0.09	0.09	359
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	272
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

3.17. Foundation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	1.39	1.39	< 0.005	0.14	0.14	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.62	1.57	27.4	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,150
Vendor	0.28	0.13	4.61	2.19	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,472
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.81	1.59	1.97	23.2	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,812
Vendor	0.27	0.12	4.79	2.25	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,464
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.30	1.13	1.40	17.4	0.00	0.00	4.19	4.19	0.00	0.98	0.98	4,217
Vendor	0.20	0.09	3.44	1.59	0.02	0.02	0.84	0.87	0.02	0.23	0.26	3,191
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.26	3.18	0.00	0.00	0.77	0.77	0.00	0.18	0.18	698
Vendor	0.04	0.02	0.63	0.29	< 0.005	< 0.005	0.15	0.16	< 0.005	0.04	0.05	528
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

3.18. Foundation (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	1.39	1.39	< 0.005	0.14	0.14	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.83	1.62	1.57	27.4	0.00	0.00	5.96	5.96	0.00	1.40	1.40	6,150
Vendor	0.28	0.13	4.61	2.19	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,472
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.81	1.59	1.97	23.2	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,812
Vendor	0.27	0.12	4.79	2.25	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,464
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.30	1.13	1.40	17.4	0.00	0.00	4.19	4.19	0.00	0.98	0.98	4,217
Vendor	0.20	0.09	3.44	1.59	0.02	0.02	0.84	0.87	0.02	0.23	0.26	3,191
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.26	3.18	0.00	0.00	0.77	0.77	0.00	0.18	0.18	698
Vendor	0.04	0.02	0.63	0.29	< 0.005	< 0.005	0.15	0.16	< 0.005	0.04	0.05	528
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

3.19. Foundation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.76	1.55	1.77	21.9	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,709
Vendor	0.27	0.09	4.59	2.14	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,363
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.20	2.64	0.00	0.00	0.68	0.68	0.00	0.16	0.16	670
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	504
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.12	0.12	0.00	0.03	0.03	111
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	83.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Foundation (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.76	1.55	1.77	21.9	0.00	0.00	5.96	5.96	0.00	1.40	1.40	5,709

Vendor	0.27	0.09	4.59	2.14	0.03	0.03	1.20	1.23	0.03	0.33	0.36	4,363
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.20	2.64	0.00	0.00	0.68	0.68	0.00	0.16	0.16	670
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	504
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.48	0.00	0.00	0.12	0.12	0.00	0.03	0.03	111
Vendor	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	83.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Paving (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.99	0.00	0.00	0.23	0.23	0.00	0.05	0.05	232
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.84	0.00	0.00	0.23	0.23	0.00	0.05	0.05	219
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	93.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	15.4
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

3.22. Paving (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	0.84	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	0.25	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	0.05	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.99	0.00	0.00	0.23	0.23	0.00	0.05	0.05	232
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.84	0.00	0.00	0.23	0.23	0.00	0.05	0.05	219
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	93.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	11.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	15.4
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

3.23. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266

Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	165
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.21	11.5	0.02	0.32	—	0.32	0.29	—	0.29	2,256
Architectural Coatings	8.95	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	0.62	0.62	< 0.005	0.06	0.06	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.68	2.10	< 0.005	0.06	—	0.06	0.05	—	0.05	374
Architectural Coatings	1.63	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.81	1.91	31.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,753
Vendor	0.28	0.12	4.26	2.06	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,045
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.80	2.14	27.1	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,386

Vendor	0.27	0.11	4.46	2.11	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,037
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.73	0.64	0.84	10.2	0.00	0.00	2.28	2.28	0.00	0.53	0.53	2,336
Vendor	0.10	0.04	1.61	0.75	0.01	0.02	0.38	0.40	0.01	0.10	0.11	1,455
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.15	1.86	0.00	0.00	0.42	0.42	0.00	0.10	0.10	387
Vendor	0.02	0.01	0.29	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	241
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

3.24. Architectural Coating (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	165

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.29	3.20	13.5	0.02	0.06	—	0.06	0.06	—	0.06	2,256
Architectural Coatings	8.95	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	0.62	0.62	< 0.005	0.06	0.06	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.58	2.46	< 0.005	0.01	—	0.01	0.01	—	0.01	374
Architectural Coatings	1.63	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.81	1.91	31.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,753
Vendor	0.28	0.12	4.26	2.06	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,045
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.04	1.80	2.14	27.1	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,386
Vendor	0.27	0.11	4.46	2.11	0.03	0.06	1.06	1.12	0.03	0.29	0.32	4,037
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.73	0.64	0.84	10.2	0.00	0.00	2.28	2.28	0.00	0.53	0.53	2,336
Vendor	0.10	0.04	1.61	0.75	0.01	0.02	0.38	0.40	0.01	0.10	0.11	1,455
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.15	1.86	0.00	0.00	0.42	0.42	0.00	0.10	0.10	387

Vendor	0.02	0.01	0.29	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	241
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

3.25. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.95	17.6	22.8	0.04	0.57	—	0.57	0.53	—	0.53	4,475
Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.21	4.15	0.01	0.10	—	0.10	0.10	—	0.10	741

Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.98	1.74	1.69	29.5	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,624
Vendor	0.25	0.12	4.08	1.94	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,961
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.95	1.71	2.12	25.0	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,260
Vendor	0.24	0.11	4.24	1.99	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,954
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.40	1.22	1.51	18.8	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,543
Vendor	0.18	0.08	3.05	1.40	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,826
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	3.42	0.00	0.00	0.82	0.82	0.00	0.19	0.19	752
Vendor	0.03	0.01	0.56	0.26	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	468
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

3.26. Architectural Coating (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,475
Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.98	1.74	1.69	29.5	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,624
Vendor	0.25	0.12	4.08	1.94	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,961

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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.95	1.71	2.12	25.0	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,260
Vendor	0.24	0.11	4.24	1.99	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,954
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.40	1.22	1.51	18.8	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,543
Vendor	0.18	0.08	3.05	1.40	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,826
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	3.42	0.00	0.00	0.82	0.82	0.00	0.19	0.19	752
Vendor	0.03	0.01	0.56	0.26	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	468
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

3.27. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.24	1.87	16.7	22.7	0.04	0.51	—	0.51	0.47	—	0.47	4,476
Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.04	4.14	0.01	0.09	—	0.09	0.09	—	0.09	741
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.91	1.68	1.67	27.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,500
Vendor	0.25	0.09	3.90	1.88	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,871
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.91	23.6	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,150
Vendor	0.24	0.08	4.06	1.89	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,865
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Worker	1.35	1.18	1.35	17.6	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,462
Vendor	0.18	0.06	2.92	1.34	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,762
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.25	3.21	0.00	0.00	0.82	0.82	0.00	0.19	0.19	739
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	457
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

3.28. Architectural Coating (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	24.9	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,476

Architectural Coatings	17.8	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	3.24	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.91	1.68	1.67	27.7	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,500
Vendor	0.25	0.09	3.90	1.88	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,871
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.90	1.67	1.91	23.6	0.00	0.00	6.42	6.42	0.00	1.50	1.50	6,150
Vendor	0.24	0.08	4.06	1.89	0.03	0.03	1.06	1.09	0.03	0.29	0.32	3,865
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.35	1.18	1.35	17.6	0.00	0.00	4.52	4.52	0.00	1.06	1.06	4,462
Vendor	0.18	0.06	2.92	1.34	0.02	0.02	0.75	0.77	0.02	0.21	0.23	2,762
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.25	3.21	0.00	0.00	0.82	0.82	0.00	0.19	0.19	739
Vendor	0.03	0.01	0.53	0.24	< 0.005	< 0.005	0.14	0.14	< 0.005	0.04	0.04	457
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	6/30/2026	5.00	195	—
Grading	Grading	12/1/2025	9/30/2026	5.00	218	—
Building Exterior	Building Construction	4/1/2026	11/30/2028	5.00	697	—
Foundation	Building Construction	7/1/2026	2/28/2028	5.00	434	—
Paving	Paving	7/1/2028	11/30/2028	5.00	109	—
Architectural Coating	Architectural Coating	7/1/2026	12/30/2028	5.00	653	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42

Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	56.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	24.0	34.0	HHDT
Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	846	34.0	HHDT

Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	822	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	220	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	491	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	124	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	456	18.5	LDA,LDT1,LDT2
Foundation	Vendor	140	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	56.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	24.0	34.0	HHDT

Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	40.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	846	34.0	HHDT
Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	822	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	220	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	491	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	124	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	456	18.5	LDA,LDT1,LDT2
Foundation	Vendor	140	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	2,568,806	841,093	91,055

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	976,000	—
Grading	55,000	935,000	109	0.00	—
Paving	0.00	0.00	0.00	0.00	34.8

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%

Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	34.8	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01
2026	5,352	690	0.05	0.01
2027	5,352	690	0.05	0.01
2028	5,352	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
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Radford - Construction (Unmitigated) - Onsite Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction (Unmitigated) - Onsite
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.23

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	1,201	1000sqft	27.6	1,200,570	10,000	—	—	—

Industrial Park	441	1000sqft	10.1	441,440	10,000	—	—	—
Strip Mall	25.0	1000sqft	0.57	25,000	500	—	—	—
Enclosed Parking with Elevator	3,871	Space	34.8	1,548,400	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.2	34.8	95.1	117	0.22	3.38	61.8	65.2	3.11	6.19	9.30	23,131
Mit.	4.42	28.5	37.0	136	0.22	0.76	61.8	62.6	0.72	6.19	6.92	23,131
% Reduced	64%	18%	61%	-16%	—	78%	—	4%	77%	—	26%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.78	31.8	60.9	78.6	0.15	2.22	46.7	48.3	2.04	4.84	6.35	15,295
Mit.	2.70	28.1	23.4	91.7	0.15	0.54	46.7	47.0	0.52	4.84	5.13	15,295
% Reduced	65%	12%	62%	-17%	—	76%	—	3%	75%	—	19%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.22	22.2	48.7	61.0	0.11	1.74	30.7	32.4	1.60	3.13	4.73	11,812

Mit.	2.16	19.5	18.8	70.1	0.11	0.36	30.7	31.0	0.35	3.13	3.48	11,812
% Reduced	65%	12%	62%	-15%	—	79%	—	4%	78%	—	26%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.13	4.05	8.89	11.1	0.02	0.32	5.59	5.91	0.29	0.57	0.86	1,956
Mit.	0.39	3.55	3.42	12.8	0.02	0.07	5.59	5.66	0.06	0.57	0.63	1,956
% Reduced	65%	12%	62%	-15%	—	79%	—	4%	78%	—	26%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	12.2	34.8	95.1	117	0.22	3.38	61.8	65.2	3.11	6.19	9.30	23,131
2027	7.49	31.1	58.3	72.8	0.14	2.01	19.5	21.5	1.85	1.95	3.80	14,560
2028	7.41	31.8	57.5	78.6	0.15	1.88	14.1	16.0	1.73	1.41	3.14	15,292
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.79	4.58	45.6	56.8	0.10	1.65	46.7	48.3	1.51	4.84	6.35	10,433
2026	7.78	31.3	60.9	73.2	0.14	2.22	46.7	48.2	2.04	4.84	6.19	14,575
2027	7.48	31.0	58.4	72.9	0.14	2.01	19.5	21.5	1.85	1.95	3.80	14,563
2028	7.40	31.8	57.6	78.6	0.15	1.88	19.5	21.3	1.73	1.95	3.64	15,295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.49	0.40	3.82	4.94	0.01	0.14	3.17	3.32	0.13	0.35	0.48	853
2026	6.22	14.0	48.7	61.0	0.11	1.74	30.7	32.4	1.60	3.13	4.73	11,812
2027	5.35	22.2	41.7	52.0	0.10	1.44	13.0	14.5	1.32	1.30	2.63	10,408
2028	4.82	22.0	37.4	50.5	0.10	1.22	9.42	10.6	1.12	0.94	2.07	9,983
Annual	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.09	0.07	0.70	0.90	< 0.005	0.03	0.58	0.61	0.02	0.06	0.09	141
2026	1.13	2.55	8.89	11.1	0.02	0.32	5.59	5.91	0.29	0.57	0.86	1,956
2027	0.98	4.05	7.61	9.49	0.02	0.26	2.38	2.64	0.24	0.24	0.48	1,723
2028	0.88	4.02	6.83	9.22	0.02	0.22	1.72	1.94	0.20	0.17	0.38	1,653

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.42	28.5	37.0	136	0.22	0.76	61.8	62.6	0.72	6.19	6.92	23,131
2027	2.53	27.1	21.5	85.7	0.14	0.50	19.5	20.0	0.48	1.95	2.43	14,560
2028	2.71	28.1	23.3	91.6	0.15	0.54	14.1	14.7	0.52	1.41	1.93	15,292
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.10	1.63	19.5	63.0	0.10	0.30	46.7	47.0	0.29	4.84	5.13	10,433
2026	2.54	27.1	21.7	85.8	0.14	0.50	46.7	47.0	0.48	4.84	5.12	14,575
2027	2.52	27.1	21.6	85.8	0.14	0.50	19.5	20.0	0.48	1.95	2.43	14,563
2028	2.70	28.1	23.4	91.7	0.15	0.54	19.5	20.0	0.52	1.95	2.43	15,295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.16	0.13	1.61	5.33	0.01	0.02	3.17	3.20	0.02	0.35	0.37	853
2026	2.16	10.8	18.8	70.1	0.11	0.36	30.7	31.0	0.35	3.13	3.48	11,812
2027	1.81	19.4	15.4	61.3	0.10	0.36	13.0	13.4	0.34	1.30	1.65	10,408
2028	1.60	19.5	14.1	59.5	0.10	0.31	9.42	9.73	0.30	0.94	1.24	9,983
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.03	0.02	0.29	0.97	< 0.005	< 0.005	0.58	0.58	< 0.005	0.06	0.07	141
2026	0.39	1.96	3.42	12.8	0.02	0.07	5.59	5.66	0.06	0.57	0.63	1,956

2027	0.33	3.53	2.81	11.2	0.02	0.06	2.38	2.44	0.06	0.24	0.30	1,723
2028	0.29	3.55	2.58	10.9	0.02	0.06	1.72	1.78	0.05	0.17	0.23	1,653

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.73	12.4	0.02	0.35	—	0.35	0.32	—	0.32	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	43.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.57	2.24	< 0.005	0.06	—	0.06	0.06	—	0.06	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

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

3.2. Demolition (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	43.2

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.62	2.27	< 0.005	0.01	—	0.01	0.01	—	0.01	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.3. Demolition (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	2.96	4.40	0.01	0.11	—	0.11	0.10	—	0.10	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.80	< 0.005	0.02	—	0.02	0.02	—	0.02	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

3.4. Demolition (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	1.19	1.20	< 0.005	0.12	0.12	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.22	4.46	0.01	0.01	—	0.01	0.01	—	0.01	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.22	0.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.02	3.37	29.6	39.3	0.07	1.29	—	1.29	1.19	—	1.19	7,067
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.80	2.39	< 0.005	0.08	—	0.08	0.07	—	0.07	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	2.39	2.39	< 0.005	0.24	0.24	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	71.0

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.44	0.44	< 0.005	0.04	0.04	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.6. Grading (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.17	8.90	45.4	0.07	0.26	—	0.26	0.25	—	0.25	7,067
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.54	2.75	< 0.005	0.02	—	0.02	0.01	—	0.01	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	2.39	2.39	< 0.005	0.24	0.24	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	71.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.44	0.44	< 0.005	0.04	0.04	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.7. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.04	1.71	14.8	21.0	0.04	0.62	—	0.62	0.57	—	0.57	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—
Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	21.0	21.0	< 0.005	2.11	2.11	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.70	3.82	0.01	0.11	—	0.11	0.10	—	0.10	625
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	3.84	3.84	< 0.005	0.38	0.39	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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

3.8. Grading (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	42.1	42.1	0.01	4.21	4.22	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.61	4.71	24.2	0.04	0.13	—	0.13	0.12	—	0.12	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—
Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	21.0	21.0	< 0.005	2.11	2.11	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.11	0.86	4.42	0.01	0.02	—	0.02	0.02	—	0.02	625
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	3.84	3.84	< 0.005	0.38	0.39	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.9. Building Exterior (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	19.7	0.04	0.64	—	0.64	0.59	—	0.59	3,868
Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	4.30	4.30	< 0.005	0.43	0.43	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.85	3.60	0.01	0.12	—	0.12	0.11	—	0.11	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.10. Building Exterior (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.46	3.49	23.6	0.04	0.10	—	0.10	0.10	—	0.10	3,868

Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	4.30	4.30	< 0.005	0.43	0.43	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.64	4.30	0.01	0.02	—	0.02	0.02	—	0.02	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.79	0.79	< 0.005	0.08	0.08	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.11. Building Exterior (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	19.7	26.1	0.05	0.76	—	0.76	0.69	—	0.69	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	5.71	5.71	< 0.005	0.57	0.57	192
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.59	4.76	0.01	0.14	—	0.14	0.13	—	0.13	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	1.04	1.04	< 0.005	0.10	0.10	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.12. Building Exterior (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.61	4.63	31.3	0.05	0.13	—	0.13	0.13	—	0.13	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	5.71	5.71	< 0.005	0.57	0.57	192

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.11	0.85	5.71	0.01	0.02	—	0.02	0.02	—	0.02	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	1.04	1.04	< 0.005	0.10	0.10	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.13. Building Exterior (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.15	1.80	17.2	23.9	0.04	0.63	—	0.63	0.58	—	0.58	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	5.24	5.24	< 0.005	0.52	0.53	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.13	4.36	0.01	0.12	—	0.12	0.11	—	0.11	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.96	0.96	< 0.005	0.10	0.10	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.14. Building Exterior (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	8.55	8.55	< 0.005	0.86	0.86	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.56	4.25	28.7	0.04	0.12	—	0.12	0.12	—	0.12	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	5.24	5.24	< 0.005	0.52	0.53	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.10	0.77	5.24	0.01	0.02	—	0.02	0.02	—	0.02	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.96	0.96	< 0.005	0.10	0.10	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.15. Foundation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	1.96	1.96	< 0.005	0.20	0.20	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.36	0.36	< 0.005	0.04	0.04	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.16. Foundation (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	1.96	1.96	< 0.005	0.20	0.20	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.36	0.36	< 0.005	0.04	0.04	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.17. Foundation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	3.88	3.88	< 0.005	0.39	0.39	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.71	0.71	< 0.005	0.07	0.07	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.18. Foundation (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	3.88	3.88	< 0.005	0.39	0.39	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.71	0.71	< 0.005	0.07	0.07	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.19. Foundation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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

3.20. Foundation (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	5.81	5.81	< 0.005	0.58	0.58	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.21. Paving (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	—	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.22. Paving (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.41	0.42	< 0.005	0.04	0.04	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	—	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

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

3.23. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266

Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	165
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.21	11.5	0.02	0.32	—	0.32	0.29	—	0.29	2,256
Architectural Coatings	—	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	1.73	1.73	< 0.005	0.17	0.17	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.68	2.10	< 0.005	0.06	—	0.06	0.05	—	0.05	374
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.32	0.32	< 0.005	0.03	0.03	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.24. Architectural Coating (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	165

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.29	3.20	13.5	0.02	0.06	—	0.06	0.06	—	0.06	2,256
Architectural Coatings	—	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	1.73	1.73	< 0.005	0.17	0.17	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.58	2.46	< 0.005	0.01	—	0.01	0.01	—	0.01	374
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.32	0.32	< 0.005	0.03	0.03	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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

3.25. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.95	17.6	22.8	0.04	0.57	—	0.57	0.53	—	0.53	4,475
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.21	4.15	0.01	0.10	—	0.10	0.10	—	0.10	741

Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.26. Architectural Coating (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,475
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

3.27. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	158

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.24	1.87	16.7	22.7	0.04	0.51	—	0.51	0.47	—	0.47	4,476
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.04	4.14	0.01	0.09	—	0.09	0.09	—	0.09	741
Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.28. Architectural Coating (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	5.15	5.15	< 0.005	0.52	0.52	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,476
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	3.44	3.44	< 0.005	0.34	0.34	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.63	0.63	< 0.005	0.06	0.06	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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

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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	6/30/2026	5.00	195	—
Grading	Grading	12/1/2025	9/30/2026	5.00	218	—
Building Exterior	Building Construction	4/1/2026	11/30/2028	5.00	697	—
Foundation	Building Construction	7/1/2026	2/28/2028	5.00	434	—
Paving	Paving	7/1/2028	11/30/2028	5.00	109	—
Architectural Coating	Architectural Coating	7/1/2026	12/30/2028	5.00	653	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50

Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29

Building Exterior	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2

Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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	2,568,806	841,093	91,055

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 (Building Square Footage)	Acres Paved (acres)

Demolition	0.00	0.00	0.00	976,000	—
Grading	55,000	935,000	109	0.00	—
Paving	0.00	0.00	0.00	0.00	34.8

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	34.8	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01
2026	5,352	690	0.05	0.01
2027	5,352	690	0.05	0.01
2028	5,352	690	0.05	0.01

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)

8. User Changes to Default Data

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Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
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Radford - Construction (MItigated) - Onsite Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction (MItigated) - Onsite
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.23

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	1,201	1000sqft	27.6	1,200,570	10,000	—	—	—

Industrial Park	441	1000sqft	10.1	441,440	10,000	—	—	—
Strip Mall	25.0	1000sqft	0.57	25,000	500	—	—	—
Enclosed Parking with Elevator	3,871	Space	34.8	1,548,400	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	12.2	34.8	95.1	117	0.22	3.38	16.1	19.4	3.11	1.74	4.74	23,131
Mit.	4.42	28.5	37.0	136	0.22	0.76	16.1	16.8	0.72	1.74	2.36	23,131
% Reduced	64%	18%	61%	-16%	—	78%	—	13%	77%	—	50%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.78	31.8	60.9	78.6	0.15	2.22	12.5	14.2	2.04	1.44	2.95	15,295
Mit.	2.70	28.1	23.4	91.7	0.15	0.54	12.5	12.8	0.52	1.44	1.72	15,295
% Reduced	65%	12%	62%	-17%	—	76%	—	10%	75%	—	42%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.22	22.2	48.7	61.0	0.11	1.74	8.62	10.4	1.60	0.93	2.53	11,812

Mit.	2.16	19.5	18.8	70.1	0.11	0.36	8.62	8.98	0.35	0.93	1.28	11,812
% Reduced	65%	12%	62%	-15%	—	79%	—	13%	78%	—	49%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.13	4.05	8.89	11.1	0.02	0.32	1.57	1.89	0.29	0.17	0.46	1,956
Mit.	0.39	3.55	3.42	12.8	0.02	0.07	1.57	1.64	0.06	0.17	0.23	1,956
% Reduced	65%	12%	62%	-15%	—	79%	—	13%	78%	—	49%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	12.2	34.8	95.1	117	0.22	3.38	16.1	19.4	3.11	1.74	4.74	23,131
2027	7.49	31.1	58.3	72.8	0.14	2.01	6.97	8.98	1.85	0.71	2.55	14,560
2028	7.41	31.8	57.5	78.6	0.15	1.88	5.04	6.92	1.73	0.51	2.24	15,292
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.79	4.58	45.6	56.8	0.10	1.65	12.5	14.2	1.51	1.44	2.95	10,433
2026	7.78	31.3	60.9	73.2	0.14	2.22	12.5	14.0	2.04	1.44	2.78	14,575
2027	7.48	31.0	58.4	72.9	0.14	2.01	6.97	8.98	1.85	0.71	2.55	14,563
2028	7.40	31.8	57.6	78.6	0.15	1.88	6.97	8.80	1.73	0.71	2.39	15,295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.49	0.40	3.82	4.94	0.01	0.14	1.13	1.27	0.13	0.14	0.27	853
2026	6.22	14.0	48.7	61.0	0.11	1.74	8.62	10.4	1.60	0.93	2.53	11,812
2027	5.35	22.2	41.7	52.0	0.10	1.44	4.66	6.09	1.32	0.47	1.79	10,408
2028	4.82	22.0	37.4	50.5	0.10	1.22	3.37	4.59	1.12	0.34	1.46	9,983
Annual	—	—	—	—	—	—	—	—	—	—	—	—

2025	0.09	0.07	0.70	0.90	< 0.005	0.03	0.21	0.23	0.02	0.03	0.05	141
2026	1.13	2.55	8.89	11.1	0.02	0.32	1.57	1.89	0.29	0.17	0.46	1,956
2027	0.98	4.05	7.61	9.49	0.02	0.26	0.85	1.11	0.24	0.09	0.33	1,723
2028	0.88	4.02	6.83	9.22	0.02	0.22	0.61	0.84	0.20	0.06	0.27	1,653

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.42	28.5	37.0	136	0.22	0.76	16.1	16.8	0.72	1.74	2.36	23,131
2027	2.53	27.1	21.5	85.7	0.14	0.50	6.97	7.47	0.48	0.71	1.18	14,560
2028	2.71	28.1	23.3	91.6	0.15	0.54	5.04	5.58	0.52	0.51	1.03	15,292
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.10	1.63	19.5	63.0	0.10	0.30	12.5	12.8	0.29	1.44	1.72	10,433
2026	2.54	27.1	21.7	85.8	0.14	0.50	12.5	12.8	0.48	1.44	1.71	14,575
2027	2.52	27.1	21.6	85.8	0.14	0.50	6.97	7.47	0.48	0.71	1.18	14,563
2028	2.70	28.1	23.4	91.7	0.15	0.54	6.97	7.46	0.52	0.71	1.18	15,295
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.16	0.13	1.61	5.33	0.01	0.02	1.13	1.15	0.02	0.14	0.17	853
2026	2.16	10.8	18.8	70.1	0.11	0.36	8.62	8.98	0.35	0.93	1.28	11,812
2027	1.81	19.4	15.4	61.3	0.10	0.36	4.66	5.01	0.34	0.47	0.81	10,408
2028	1.60	19.5	14.1	59.5	0.10	0.31	3.37	3.68	0.30	0.34	0.64	9,983
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.03	0.02	0.29	0.97	< 0.005	< 0.005	0.21	0.21	< 0.005	0.03	0.03	141
2026	0.39	1.96	3.42	12.8	0.02	0.07	1.57	1.64	0.06	0.17	0.23	1,956

2027	0.33	3.53	2.81	11.2	0.02	0.06	0.85	0.91	0.06	0.09	0.15	1,723
2028	0.29	3.55	2.58	10.9	0.02	0.06	0.61	0.67	0.05	0.06	0.12	1,653

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.73	12.4	0.02	0.35	—	0.35	0.32	—	0.32	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	43.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.57	2.24	< 0.005	0.06	—	0.06	0.06	—	0.06	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

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

3.2. Demolition (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	43.2

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.62	2.27	< 0.005	0.01	—	0.01	0.01	—	0.01	324
Demolition	—	—	—	—	—	—	0.57	0.57	—	0.09	0.09	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	53.7
Demolition	—	—	—	—	—	—	0.10	0.10	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.3. Demolition (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.37	12.4	0.02	0.30	—	0.30	0.28	—	0.28	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	2.96	4.40	0.01	0.11	—	0.11	0.10	—	0.10	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.80	< 0.005	0.02	—	0.02	0.02	—	0.02	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

3.4. Demolition (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.19	0.13	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.21	0.21	3.44	12.6	0.02	0.03	—	0.03	0.03	—	0.03	1,801
Demolition	—	—	—	—	—	—	3.18	3.18	—	0.48	0.48	—
Onsite truck	0.02	0.01	0.20	0.14	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	42.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.22	4.46	0.01	0.01	—	0.01	0.01	—	0.01	638
Demolition	—	—	—	—	—	—	1.13	1.13	—	0.17	0.17	—
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	15.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.22	0.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	106
Demolition	—	—	—	—	—	—	0.21	0.21	—	0.03	0.03	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	2.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.5. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.02	3.37	29.6	39.3	0.07	1.29	—	1.29	1.19	—	1.19	7,067
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.80	2.39	< 0.005	0.08	—	0.08	0.07	—	0.07	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	0.50	0.51	< 0.005	0.05	0.05	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.33	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	71.0

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.6. Grading (2025) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.17	8.90	45.4	0.07	0.26	—	0.26	0.25	—	0.25	7,067
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.60	0.25	7.00	4.86	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,522
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.54	2.75	< 0.005	0.02	—	0.02	0.01	—	0.01	429
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.04	0.02	0.42	0.29	< 0.005	< 0.005	0.50	0.51	< 0.005	0.05	0.05	92.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	71.0
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	15.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.7. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.82	3.20	27.7	39.2	0.07	1.15	—	1.15	1.06	—	1.06	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.04	1.71	14.8	21.0	0.04	0.62	—	0.62	0.57	—	0.57	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—
Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	4.44	4.45	< 0.005	0.45	0.46	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.70	3.82	0.01	0.11	—	0.11	0.10	—	0.10	625
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	0.81	0.81	< 0.005	0.08	0.08	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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

3.8. Grading (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.62	0.28	6.59	4.71	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,488
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.25	1.14	8.81	45.4	0.07	0.24	—	0.24	0.23	—	0.23	7,070
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—
Onsite truck	0.59	0.25	6.91	4.85	0.01	0.01	8.89	8.90	0.01	0.90	0.91	1,499
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.61	4.71	24.2	0.04	0.13	—	0.13	0.12	—	0.12	3,777
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—
Onsite truck	0.32	0.14	3.61	2.55	0.01	< 0.005	4.44	4.45	< 0.005	0.45	0.46	797
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.11	0.86	4.42	0.01	0.02	—	0.02	0.02	—	0.02	625
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.06	0.03	0.66	0.47	< 0.005	< 0.005	0.81	0.81	< 0.005	0.08	0.08	132
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.9. Building Exterior (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	19.7	0.04	0.64	—	0.64	0.59	—	0.59	3,868
Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	1.54	1.54	< 0.005	0.16	0.16	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.85	3.60	0.01	0.12	—	0.12	0.11	—	0.11	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.10. Building Exterior (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.10	0.81	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	273
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.49	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,188
Onsite truck	0.10	0.05	1.15	0.85	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	274
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.46	3.49	23.6	0.04	0.10	—	0.10	0.10	—	0.10	3,868

Onsite truck	0.05	0.03	0.60	0.45	< 0.005	< 0.005	1.54	1.54	< 0.005	0.16	0.16	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.64	4.30	0.01	0.02	—	0.02	0.02	—	0.02	640
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	24.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.11. Building Exterior (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.41	2.86	27.5	36.5	0.07	1.06	—	1.06	0.97	—	0.97	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.43	2.04	19.7	26.1	0.05	0.76	—	0.76	0.69	—	0.69	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	2.04	2.04	< 0.005	0.21	0.21	192
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.37	3.59	4.76	0.01	0.14	—	0.14	0.13	—	0.13	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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

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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.12. Building Exterior (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.08	0.80	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	268
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.13	0.84	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	270
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.61	4.63	31.3	0.05	0.13	—	0.13	0.13	—	0.13	5,133
Onsite truck	0.07	0.04	0.79	0.58	< 0.005	< 0.005	2.04	2.04	< 0.005	0.21	0.21	192

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.11	0.85	5.71	0.01	0.02	—	0.02	0.02	—	0.02	850
Onsite truck	0.01	0.01	0.14	0.11	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	31.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.13. Building Exterior (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.75	26.2	36.5	0.07	0.96	—	0.96	0.89	—	0.89	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.15	1.80	17.2	23.9	0.04	0.63	—	0.63	0.58	—	0.58	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	1.87	1.87	< 0.005	0.19	0.19	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	3.13	4.36	0.01	0.12	—	0.12	0.11	—	0.11	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.03	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.14. Building Exterior (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.10	0.05	1.05	0.79	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	263
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.85	6.48	43.8	0.07	0.18	—	0.18	0.18	—	0.18	7,187
Onsite truck	0.09	0.05	1.10	0.82	< 0.005	< 0.005	3.06	3.06	< 0.005	0.31	0.31	265
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.56	4.25	28.7	0.04	0.12	—	0.12	0.12	—	0.12	4,712
Onsite truck	0.06	0.03	0.71	0.53	< 0.005	< 0.005	1.87	1.87	< 0.005	0.19	0.19	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.11	0.10	0.77	5.24	0.01	0.02	—	0.02	0.02	—	0.02	780
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.03	28.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.15. Foundation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	0.70	0.70	< 0.005	0.07	0.07	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.16. Foundation (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.74	0.55	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.78	0.58	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	186
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.18	1.34	0.93	< 0.005	0.05	—	0.05	0.05	—	0.05	177
Onsite truck	0.02	0.01	0.28	0.20	< 0.005	< 0.005	0.70	0.70	< 0.005	0.07	0.07	66.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.24	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	29.3
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	11.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.17. Foundation (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	1.39	1.39	< 0.005	0.14	0.14	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.18. Foundation (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.07	0.04	0.73	0.54	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	3.69	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.76	0.57	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	2.64	1.84	< 0.005	0.11	—	0.11	0.10	—	0.10	351
Onsite truck	0.05	0.02	0.54	0.40	< 0.005	< 0.005	1.39	1.39	< 0.005	0.14	0.14	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.06	0.48	0.34	< 0.005	0.02	—	0.02	0.02	—	0.02	58.1
Onsite truck	0.01	< 0.005	0.10	0.07	< 0.005	< 0.005	0.25	0.25	< 0.005	0.03	0.03	21.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.19. Foundation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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

3.20. Foundation (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.48	3.68	2.57	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	0.06	0.03	0.75	0.56	< 0.005	< 0.005	2.08	2.08	< 0.005	0.21	0.21	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.02	—	0.02	56.7
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	20.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.21. Paving (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	—	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.22. Paving (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.25	9.02	0.01	0.20	—	0.20	0.18	—	0.18	1,399
Paving	—	0.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	12.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.87	2.69	< 0.005	0.06	—	0.06	0.05	—	0.05	418
Paving	—	0.25	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.83
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	69.2
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.63
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

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

3.23. Architectural Coating (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266

Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.40	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	165
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.21	11.5	0.02	0.32	—	0.32	0.29	—	0.29	2,256
Architectural Coatings	—	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	0.62	0.62	< 0.005	0.06	0.06	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.19	1.68	2.10	< 0.005	0.06	—	0.06	0.05	—	0.05	374
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.24. Architectural Coating (2026) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.49	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	164
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.69	0.51	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	165

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.29	3.20	13.5	0.02	0.06	—	0.06	0.06	—	0.06	2,256
Architectural Coatings	—	8.95	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.24	0.18	< 0.005	< 0.005	0.62	0.62	< 0.005	0.06	0.06	59.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.58	2.46	< 0.005	0.01	—	0.01	0.01	—	0.01	374
Architectural Coatings	—	1.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	9.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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

3.25. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.28	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.95	17.6	22.8	0.04	0.57	—	0.57	0.53	—	0.53	4,475
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.36	3.21	4.15	0.01	0.10	—	0.10	0.10	—	0.10	741

Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.26. Architectural Coating (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.65	0.48	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.68	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	162
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,475
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.47	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	19.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

3.27. Architectural Coating (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	158

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	2.62	23.3	31.8	0.06	0.71	—	0.71	0.66	—	0.66	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.24	1.87	16.7	22.7	0.04	0.51	—	0.51	0.47	—	0.47	4,476
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	0.34	3.04	4.14	0.01	0.09	—	0.09	0.09	—	0.09	741
Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.28. Architectural Coating (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.63	0.47	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	158
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.84	0.81	8.86	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	—	24.9	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.03	0.66	0.50	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.60	0.58	6.33	26.8	0.04	0.12	—	0.12	0.11	—	0.11	4,476
Architectural Coatings	—	17.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.46	0.35	< 0.005	< 0.005	1.23	1.23	< 0.005	0.12	0.12	113
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	1.16	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	—	3.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	18.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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

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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	6/30/2026	5.00	195	—
Grading	Grading	12/1/2025	9/30/2026	5.00	218	—
Building Exterior	Building Construction	4/1/2026	11/30/2028	5.00	697	—
Foundation	Building Construction	7/1/2026	2/28/2028	5.00	434	—
Paving	Paving	7/1/2028	11/30/2028	5.00	109	—
Architectural Coating	Architectural Coating	7/1/2026	12/30/2028	5.00	653	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50

Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29

Building Exterior	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	2.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2

Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	12.0	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	423	0.50	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	110	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	5.00	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	62.0	0.50	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	70.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	2,568,806	841,093	91,055

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 (Building Square Footage)	Acres Paved (acres)

Demolition	0.00	0.00	0.00	976,000	—
Grading	55,000	935,000	109	0.00	—
Paving	0.00	0.00	0.00	0.00	34.8

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	34.8	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01
2026	5,352	690	0.05	0.01
2027	5,352	690	0.05	0.01
2028	5,352	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Characteristics: Utility Information	SB100 Adjustment for Year 2023
Construction: Dust From Material Movement	See assumptions

Radford - Construction Phase 1 (Onsite) - Unmitigated Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 1 (Onsite) - Unmitigated
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Strip Mall	61.6	1000sqft	1.41	61,560	10,000	—	—	—
Enclosed Parking with Elevator	1,078	Space	9.70	304,020	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.86	54.9	68.9	0.13	2.06	0.40	2.46	1.90	0.04	1.94	13,513
Mit.	4.82	16.0	81.7	0.13	0.38	0.40	0.78	0.37	0.04	0.41	13,513
% Reduced	46%	71%	-19%	—	82%	—	68%	81%	—	79%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.89	61.5	85.4	0.15	2.57	1.26	3.24	2.37	0.16	2.43	16,075
Mit.	4.36	17.9	101	0.15	0.57	1.26	1.68	0.55	0.16	0.62	16,075
% Reduced	37%	71%	-18%	—	78%	—	48%	77%	—	75%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.61	29.1	37.6	0.07	1.11	0.26	1.36	1.02	0.03	1.05	7,257
Mit.	2.49	9.02	44.3	0.07	0.23	0.26	0.49	0.22	0.03	0.25	7,257
% Reduced	46%	69%	-18%	—	79%	—	64%	78%	—	76%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.84	5.30	6.86	0.01	0.20	0.05	0.25	0.19	0.01	0.19	1,201
Mit.	0.45	1.65	8.08	0.01	0.04	0.05	0.09	0.04	0.01	0.05	1,201
% Reduced	46%	69%	-18%	—	79%	—	64%	78%	—	76%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2026	8.86	54.9	68.9	0.13	2.06	0.40	2.46	1.90	0.04	1.94	13,513
2027	6.78	31.1	41.0	0.08	1.02	0.11	1.13	0.94	0.01	0.95	7,686
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	4.77	41.0	65.4	0.11	1.85	1.21	3.05	1.70	0.16	1.85	11,412
2026	6.89	61.5	85.4	0.15	2.57	1.26	3.24	2.37	0.16	2.43	16,075
2027	6.78	31.1	41.0	0.08	1.02	0.11	1.13	0.94	0.01	0.95	7,686
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.43	3.69	6.26	0.01	0.17	0.18	0.35	0.15	0.02	0.18	1,060
2026	4.61	29.1	37.6	0.07	1.11	0.26	1.36	1.02	0.03	1.05	7,257
2027	1.59	7.31	9.63	0.02	0.24	0.02	0.26	0.22	< 0.005	0.22	1,808
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.67	1.14	< 0.005	0.03	0.03	0.06	0.03	< 0.005	0.03	175
2026	0.84	5.30	6.86	0.01	0.20	0.05	0.25	0.19	0.01	0.19	1,201
2027	0.29	1.33	1.76	< 0.005	0.04	< 0.005	0.05	0.04	< 0.005	0.04	299

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2026	4.82	16.0	81.7	0.13	0.38	0.40	0.78	0.37	0.04	0.41	13,513

2027	4.36	14.6	47.3	0.08	0.20	0.11	0.31	0.20	0.01	0.21	7,686
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.27	9.52	75.4	0.11	0.26	1.21	1.47	0.26	0.16	0.42	11,412
2026	3.82	17.9	101	0.15	0.57	1.26	1.68	0.55	0.16	0.62	16,075
2027	4.36	14.6	47.3	0.08	0.20	0.11	0.31	0.20	0.01	0.21	7,686
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.11	0.86	7.13	0.01	0.02	0.18	0.20	0.02	0.02	0.05	1,060
2026	2.49	9.02	44.3	0.07	0.23	0.26	0.49	0.22	0.03	0.25	7,257
2027	1.02	3.43	11.1	0.02	0.05	0.02	0.07	0.05	< 0.005	0.05	1,808
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.02	0.16	1.30	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	0.01	175
2026	0.45	1.65	8.08	0.01	0.04	0.05	0.09	0.04	0.01	0.05	1,201
2027	0.19	0.63	2.03	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	299

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	9.93	19.2	0.03	0.45	—	0.45	0.41	—	0.41	3,058
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	20.3

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	1.79	3.45	0.01	0.08	—	0.08	0.07	—	0.07	551
Demolition	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.63	< 0.005	0.01	—	0.01	0.01	—	0.01	91.2
Demolition	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,058
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.41	3.85	0.01	0.01	—	0.01	0.01	—	0.01	551
Demolition	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	3.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	91.2
Demolition	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Demolition (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	9.11	19.1	0.03	0.39	—	0.39	0.35	—	0.35	3,057
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	20.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.55	1.16	< 0.005	0.02	—	0.02	0.02	—	0.02	185
Demolition	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.21
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.7
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.4. Demolition (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	20.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.14	1.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	185
Demolition	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.21
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.7
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	30.9	46.1	0.08	1.39	—	1.39	1.28	—	1.28	8,324
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	10.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	1.87	2.79	< 0.005	0.08	—	0.08	0.08	—	0.08	505
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.34	0.51	< 0.005	0.02	—	0.02	0.01	—	0.01	83.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.6. Grading (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.06	53.9	0.08	0.21	—	0.21	0.20	—	0.20	8,324
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	10.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.43	3.27	< 0.005	0.01	—	0.01	0.01	—	0.01	505
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.61
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.08	0.60	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	83.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Grading (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.38	28.4	45.9	0.08	1.24	—	1.24	1.14	—	1.14	8,326
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.28	5.30	0.01	0.14	—	0.14	0.13	—	0.13	961
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.60	0.97	< 0.005	0.03	—	0.03	0.02	—	0.02	159
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Grading (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.05	53.9	0.08	0.20	—	0.20	0.20	—	0.20	8,326
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	6.22	0.01	0.02	—	0.02	0.02	—	0.02	961
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	159
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Foundation (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.87	0.61	< 0.005	0.04	—	0.04	0.03	—	0.03	116
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	19.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Foundation (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.87	0.61	< 0.005	0.04	—	0.04	0.03	—	0.03	116
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	19.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Building Exterior (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.01	0.26	0.20	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	44.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.01	0.27	0.21	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	45.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	11.9	15.1	0.03	0.49	—	0.49	0.45	—	0.45	2,954
Onsite truck	0.01	0.11	0.08	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	18.5
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.22	2.18	2.75	0.01	0.09	—	0.09	0.08	—	0.08	489
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.12. Building Exterior (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.99	6.79	44.0	0.07	0.21	—	0.21	0.21	—	0.21	7,188
Onsite truck	0.01	0.26	0.20	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	44.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	6.79	44.0	0.07	0.21	—	0.21	0.21	—	0.21	7,188
Onsite truck	0.01	0.27	0.21	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	45.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	2.79	18.1	0.03	0.09	—	0.09	0.09	—	0.09	2,954
Onsite truck	0.01	0.11	0.08	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	18.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.51	3.30	0.01	0.02	—	0.02	0.02	—	0.02	489
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Paving (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	6.42	9.04	0.01	0.22	—	0.22	0.20	—	0.20	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	6.42	9.04	0.01	0.22	—	0.22	0.20	—	0.20	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.51	2.13	< 0.005	0.05	—	0.05	0.05	—	0.05	330
Paving	0.07	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.28	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	54.6
Paving	0.01	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Paving (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399

Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.33	2.29	< 0.005	0.01	—	0.01	0.01	—	0.01	330
Paving	0.07	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.6
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	12.3	15.3	0.03	0.42	—	0.42	0.39	—	0.39	3,004
Architectural Coatings	1.44	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.32

Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	2.24	2.80	0.01	0.08	—	0.08	0.07	—	0.07	497
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.55
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.16. Architectural Coating (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	4.26	18.0	0.03	0.08	—	0.08	0.08	—	0.08	3,004
Architectural Coatings	1.44	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.32
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.78	3.28	0.01	0.01	—	0.01	0.01	—	0.01	497
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.55
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.17. Architectural Coating (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265

Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	5.78	7.48	0.01	0.19	—	0.19	0.17	—	0.17	1,471
Architectural Coatings	0.71	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.05	1.37	< 0.005	0.03	—	0.03	0.03	—	0.03	244
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.26
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.18. Architectural Coating (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	2.08	8.81	0.01	0.04	—	0.04	0.04	—	0.04	1,471
Architectural Coatings	0.71	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.38	1.61	< 0.005	0.01	—	0.01	0.01	—	0.01	244

Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.26
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	1/31/2026	5.00	88.0	—
Grading	Grading	12/1/2025	2/28/2026	5.00	65.0	—

Foundation	Building Construction	1/1/2026	4/30/2026	5.00	86.0	—
Building Exterior	Building Construction	2/1/2026	8/30/2026	5.00	150	—
Paving	Paving	1/1/2027	4/30/2027	5.00	86.0	—
Architectural Coating	Architectural Coating	5/1/2026	4/30/2027	5.00	261	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29

Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Back hoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42

Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Foundation	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38

Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	29.0	HHDT
Demolition	Onsite truck	8.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	4.00	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT

Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	4.00	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	4.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	4.00	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	26.0	0.20	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	29.0	HHDT
Demolition	Onsite truck	8.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT

Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	4.00	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	4.00	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	4.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	4.00	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	26.0	0.20	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

Sweep paved roads once per month	9%	9%

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	111,358	32,893	25,357

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	93,091	—
Grading	0.00	1,850	33.0	0.00	—
Paving	0.00	0.00	0.00	0.00	9.70

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Strip Mall	0.00	0%
Enclosed Parking with Elevator	9.70	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01
2026	5,511	690	0.05	0.01
2027	2,121	690	0.05	0.01

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
Land Use	see assumptions

Radford - Construction Phase 2 (Onsite) - Unmitigated Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 2 (Onsite) - Unmitigated
Construction Start Date	11/1/2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	497	1000sqft	11.4	496,601	10,000	—	—	—

Industrial Park	104	1000sqft	2.38	103,680	10,000	—	—	—
Strip Mall	96.3	1000sqft	2.21	96,300	10,000	—	—	—
Enclosed Parking with Elevator	445	Space	4.00	304,020	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.3	37.8	66.6	0.12	1.14	17.2	18.3	1.04	1.76	2.80	11,952
Mit.	16.6	19.2	75.8	0.12	0.39	17.2	17.6	0.37	1.76	2.13	11,952
% Reduced	10%	49%	-14%	—	66%	—	4%	65%	—	24%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.3	39.8	60.3	0.11	1.18	16.4	17.6	1.09	1.65	2.74	11,418
Mit.	16.4	20.7	69.7	0.11	0.42	16.4	16.9	0.40	1.65	2.05	11,418
% Reduced	10%	48%	-16%	—	65%	—	4%	63%	—	25%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.4	18.3	32.2	0.06	0.54	6.96	7.49	0.49	0.72	1.21	5,765
Mit.	10.5	8.71	36.7	0.06	0.20	6.96	7.12	0.19	0.72	0.88	5,765

% Reduced	8%	52%	-14%	—	63%	—	5%	62%	—	28%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.08	3.34	5.87	0.01	0.10	1.27	1.37	0.09	0.13	0.22	955
Mit.	1.91	1.59	6.70	0.01	0.04	1.27	1.30	0.03	0.13	0.16	955
% Reduced	8%	52%	-14%	—	63%	—	5%	62%	—	28%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.98	7.81	19.4	0.03	0.26	1.28	1.54	0.24	0.16	0.40	3,103
2031	4.31	37.8	66.6	0.12	1.14	17.2	18.3	1.04	1.76	2.80	11,952
2032	18.2	27.3	37.8	0.08	0.79	0.94	1.72	0.72	0.09	0.82	7,496
2033	18.3	28.9	44.1	0.08	0.73	0.94	1.67	0.67	0.09	0.77	8,402
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.98	7.82	19.4	0.03	0.26	1.28	1.54	0.24	0.16	0.40	3,104
2031	4.30	39.8	60.3	0.11	1.18	16.4	17.6	1.09	1.65	2.74	11,418
2032	17.7	38.6	60.1	0.11	1.10	16.4	17.5	1.01	1.65	2.66	11,404
2033	18.3	29.0	44.1	0.08	0.73	0.94	1.67	0.67	0.09	0.77	8,403
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2030	0.41	3.27	8.12	0.01	0.11	0.52	0.63	0.10	0.07	0.17	1,300
2031	2.02	17.9	32.2	0.06	0.54	6.96	7.49	0.49	0.72	1.21	5,765
2032	10.1	18.3	27.1	0.05	0.52	2.19	2.71	0.48	0.22	0.70	5,327
2033	11.4	13.6	20.9	0.04	0.34	0.30	0.64	0.31	0.03	0.34	4,056
Annual	—	—	—	—	—	—	—	—	—	—	—
2030	0.07	0.60	1.48	< 0.005	0.02	0.09	0.11	0.02	0.01	0.03	215

2031	0.37	3.28	5.87	0.01	0.10	1.27	1.37	0.09	0.13	0.22	955
2032	1.85	3.34	4.95	0.01	0.09	0.40	0.49	0.09	0.04	0.13	882
2033	2.08	2.49	3.82	0.01	0.06	0.05	0.12	0.06	0.01	0.06	671

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.31	2.55	21.6	0.03	0.06	1.28	1.34	0.06	0.16	0.22	3,103
2031	1.96	19.2	75.8	0.12	0.39	17.2	17.6	0.37	1.76	2.13	11,952
2032	16.6	13.9	44.6	0.08	0.36	0.94	1.29	0.34	0.09	0.43	7,496
2033	16.4	15.9	51.8	0.08	0.26	0.94	1.19	0.25	0.09	0.34	8,402
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.31	2.56	21.6	0.03	0.06	1.28	1.34	0.06	0.16	0.22	3,104
2031	2.01	20.7	69.7	0.11	0.42	16.4	16.9	0.40	1.65	2.05	11,418
2032	16.1	20.6	69.7	0.11	0.42	16.4	16.9	0.40	1.65	2.05	11,404
2033	16.4	15.9	51.8	0.08	0.26	0.94	1.19	0.25	0.09	0.34	8,403
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2030	0.13	1.07	9.04	0.01	0.02	0.52	0.54	0.02	0.07	0.09	1,300
2031	0.86	8.61	36.7	0.06	0.17	6.96	7.12	0.16	0.72	0.88	5,765
2032	9.00	8.71	32.1	0.05	0.20	2.19	2.39	0.19	0.22	0.41	5,327
2033	10.5	6.99	24.7	0.04	0.12	0.30	0.42	0.12	0.03	0.15	4,056
Annual	—	—	—	—	—	—	—	—	—	—	—
2030	0.02	0.20	1.65	< 0.005	< 0.005	0.09	0.10	< 0.005	0.01	0.02	215
2031	0.16	1.57	6.70	0.01	0.03	1.27	1.30	0.03	0.13	0.16	955
2032	1.64	1.59	5.85	0.01	0.04	0.40	0.44	0.03	0.04	0.07	882

2033	1.91	1.28	4.51	0.01	0.02	0.05	0.08	0.02	0.01	0.03	671

3. Construction Emissions Details

3.1. Demolition (2030) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.53	19.2	0.03	0.26	—	0.26	0.24	—	0.24	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.28	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	46.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.53	19.2	0.03	0.26	—	0.26	0.24	—	0.24	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	46.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.16	8.03	0.01	0.11	—	0.11	0.10	—	0.10	1,280
Demolition	—	—	—	—	—	0.26	0.26	—	0.04	0.04	—
Onsite truck	0.01	0.12	0.09	< 0.005	< 0.005	0.26	0.26	< 0.005	0.03	0.03	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.58	1.47	< 0.005	0.02	—	0.02	0.02	—	0.02	212
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—

Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	< 0.005	3.23
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2030) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057

Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.28	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	46.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	46.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.95	8.95	0.01	0.02	—	0.02	0.02	—	0.02	1,280
Demolition	—	—	—	—	—	0.26	0.26	—	0.04	0.04	—
Onsite truck	0.01	0.12	0.09	< 0.005	< 0.005	0.26	0.26	< 0.005	0.03	0.03	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	1.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	212
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	< 0.005	3.23
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Demolition (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.93	7.22	19.2	0.03	0.24	—	0.24	0.22	—	0.22	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	45.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.93	7.22	19.2	0.03	0.24	—	0.24	0.22	—	0.22	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	46.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	3.86	10.2	0.02	0.13	—	0.13	0.12	—	0.12	1,633
Demolition	—	—	—	—	—	0.33	0.33	—	0.05	0.05	—
Onsite truck	0.01	0.15	0.12	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	24.5

Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.70	1.87	< 0.005	0.02	—	0.02	0.02	—	0.02	270
Demolition	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	4.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.4. Demolition (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	45.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.66	0.66	< 0.005	0.07	0.07	46.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.21	11.4	0.02	0.03	—	0.03	0.03	—	0.03	1,633
Demolition	—	—	—	—	—	0.33	0.33	—	0.05	0.05	—
Onsite truck	0.01	0.15	0.12	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	2.08	< 0.005	0.01	—	0.01	0.01	—	0.01	270
Demolition	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	4.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.5. Grading (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.57	20.1	39.4	0.07	0.75	—	0.75	0.69	—	0.69	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.30	6.34	5.09	0.01	< 0.005	15.5	15.5	< 0.005	1.55	1.56	1,063
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.57	20.1	39.4	0.07	0.75	—	0.75	0.69	—	0.69	7,261

Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.70	5.23	0.01	< 0.005	15.5	15.5	< 0.005	1.55	1.56	1,078
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	8.44	16.5	0.03	0.31	—	0.31	0.29	—	0.29	3,041
Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	0.12	2.72	2.16	0.01	< 0.005	6.06	6.06	< 0.005	0.61	0.61	448
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.54	3.01	0.01	0.06	—	0.06	0.05	—	0.05	503
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.02	0.50	0.39	< 0.005	< 0.005	1.11	1.11	< 0.005	0.11	0.11	74.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.6. Grading (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	6.51	46.4	0.07	0.18	—	0.18	0.18	—	0.18	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.30	6.34	5.09	0.01	< 0.005	15.5	15.5	< 0.005	1.55	1.56	1,063
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	6.51	46.4	0.07	0.18	—	0.18	0.18	—	0.18	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.70	5.23	0.01	< 0.005	15.5	15.5	< 0.005	1.55	1.56	1,078
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	2.72	19.4	0.03	0.08	—	0.08	0.07	—	0.07	3,041

Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	0.12	2.72	2.16	0.01	< 0.005	6.06	6.06	< 0.005	0.61	0.61	448
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.50	3.55	0.01	0.01	—	0.01	0.01	—	0.01	503
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.02	0.50	0.39	< 0.005	< 0.005	1.11	1.11	< 0.005	0.11	0.11	74.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Grading (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.49	19.3	39.3	0.07	0.69	—	0.69	0.64	—	0.64	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.64	5.24	0.01	< 0.005	15.5	15.5	< 0.005	1.55	1.56	1,063
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.23	4.53	0.01	0.08	—	0.08	0.07	—	0.07	838
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.74	0.60	< 0.005	< 0.005	1.67	1.67	< 0.005	0.17	0.17	122
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.41	0.83	< 0.005	0.01	—	0.01	0.01	—	0.01	139
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.14	0.11	< 0.005	< 0.005	0.30	0.31	< 0.005	0.03	0.03	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Grading (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	6.51	46.4	0.07	0.18	—	0.18	0.18	—	0.18	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.64	5.24	0.01	< 0.005	15.5	15.5	< 0.005	1.55	1.56	1,063
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.75	5.36	0.01	0.02	—	0.02	0.02	—	0.02	838
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.74	0.60	< 0.005	< 0.005	1.67	1.67	< 0.005	0.17	0.17	122
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	139
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.14	0.11	< 0.005	< 0.005	0.30	0.31	< 0.005	0.03	0.03	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Foundation (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.09	0.77	< 0.005	0.04	—	0.04	0.04	—	0.04	147
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	9.50
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.4
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Foundation (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.09	0.77	< 0.005	0.04	—	0.04	0.04	—	0.04	147

Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	9.50
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.4
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Foundation (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.08	0.76	< 0.005	0.04	—	0.04	0.04	—	0.04	145
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	9.20
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.0
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.52
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.12. Foundation (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	31.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.08	0.76	< 0.005	0.04	—	0.04	0.04	—	0.04	145
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	9.20
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.0
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.52
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Building Exterior (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	8.69	12.7	0.02	0.28	—	0.28	0.26	—	0.26	2,490
Onsite truck	0.02	0.38	0.30	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	63.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.56	2.28	< 0.005	0.05	—	0.05	0.05	—	0.05	448
Onsite truck	< 0.005	0.07	0.05	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	11.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.29	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	74.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Building Exterior (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.38	0.30	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	63.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.59	2.72	< 0.005	0.02	—	0.02	0.02	—	0.02	448
Onsite truck	< 0.005	0.07	0.05	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	11.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	74.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Building Exterior (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	8.42	12.6	0.02	0.26	—	0.26	0.24	—	0.24	2,490
Onsite truck	0.02	0.36	0.29	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	62.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	8.42	12.6	0.02	0.26	—	0.26	0.24	—	0.24	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	62.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.03	9.01	0.02	0.19	—	0.19	0.17	—	0.17	1,784
Onsite truck	0.01	0.26	0.21	< 0.005	< 0.005	0.36	0.36	< 0.005	0.04	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.10	1.64	< 0.005	0.03	—	0.03	0.03	—	0.03	295
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	7.39

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

3.16. Building Exterior (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.36	0.29	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	62.0

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	62.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.33	10.8	0.02	0.07	—	0.07	0.06	—	0.06	1,784
Onsite truck	0.01	0.26	0.21	< 0.005	< 0.005	0.36	0.36	< 0.005	0.04	0.04	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.43	1.97	< 0.005	0.01	—	0.01	0.01	—	0.01	295
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	7.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	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

3.17. Building Exterior (2033) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	8.19	12.6	0.02	0.24	—	0.24	0.22	—	0.22	2,490
Onsite truck	0.02	0.35	0.28	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	60.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	8.19	12.6	0.02	0.24	—	0.24	0.22	—	0.22	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	61.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.40	3.69	0.01	0.07	—	0.07	0.06	—	0.06	731
Onsite truck	< 0.005	0.11	0.09	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	18.0
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.44	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	121
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	2.98
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.18. Building Exterior (2033) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.35	0.28	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	60.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.53	0.54	< 0.005	0.05	0.05	61.7

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.96	4.43	0.01	0.03	—	0.03	0.03	—	0.03	731
Onsite truck	< 0.005	0.11	0.09	< 0.005	< 0.005	0.15	0.15	< 0.005	0.01	0.01	18.0
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	121
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	2.98
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.19. Paving (2033) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	5.87	8.90	0.01	0.14	—	0.14	0.13	—	0.13	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	30.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	5.87	8.90	0.01	0.14	—	0.14	0.13	—	0.13	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	30.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.70	2.59	< 0.005	0.04	—	0.04	0.04	—	0.04	406
Paving	0.03	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.89
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.31	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	67.3
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.47
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.20. Paving (2033) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	30.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	30.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.64	2.82	< 0.005	0.01	—	0.01	0.01	—	0.01	406
Paving	0.03	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.89
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.30	0.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	67.3
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.47
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.21. Architectural Coating (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	14.6	22.1	0.04	0.38	—	0.38	0.35	—	0.35	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	14.6	22.1	0.04	0.38	—	0.38	0.35	—	0.35	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	7.87	11.9	0.02	0.21	—	0.21	0.19	—	0.19	2,369
Architectural Coatings	8.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.38
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	1.44	2.18	< 0.005	0.04	—	0.04	0.03	—	0.03	392
Architectural Coatings	1.48	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.22. Architectural Coating (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	3.44	14.3	0.02	0.07	—	0.07	0.07	—	0.07	2,369
Architectural Coatings	8.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.38
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.63	2.60	< 0.005	0.01	—	0.01	0.01	—	0.01	392
Architectural Coatings	1.48	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.23. Architectural Coating (2033) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.3	22.1	0.04	0.35	—	0.35	0.32	—	0.32	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.3	22.1	0.04	0.35	—	0.35	0.32	—	0.32	4,403

Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	9.32	14.5	0.03	0.23	—	0.23	0.21	—	0.21	2,878
Architectural Coatings	9.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.06	0.05	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	10.0
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.70	2.64	0.01	0.04	—	0.04	0.04	—	0.04	476
Architectural Coatings	1.80	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.66
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.24. Architectural Coating (2033) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	15.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	4.18	17.3	0.03	0.08	—	0.08	0.08	—	0.08	2,878
Architectural Coatings	9.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.06	0.05	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	10.0
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.76	3.16	0.01	0.02	—	0.02	0.01	—	0.01	476
Architectural Coatings	1.80	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.66
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2030	9/30/2031	5.00	347	—
Grading	Grading	6/1/2031	2/28/2032	5.00	195	—
Foundation	Building Construction	8/1/2031	5/30/2032	5.00	216	—
Building Exterior	Building Construction	10/1/2031	5/30/2033	5.00	434	—
Paving	Paving	1/1/2033	5/30/2033	5.00	106	—
Architectural Coating	Architectural Coating	4/1/2032	11/30/2033	5.00	435	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	4.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	8.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	2.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	3.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38

Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	2.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Foundation	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36

Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	4.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	8.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Tier 4 Final	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	3.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	35.0	HHDT
Demolition	Onsite truck	20.0	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	466	0.20	HHDT
Foundation	—	—	—	—

Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	20.0	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	20.0	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	10.0	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	40.0	0.20	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	35.0	HHDT
Demolition	Onsite truck	20.0	0.20	HHDT

Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	466	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	20.0	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	20.0	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	10.0	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	40.0	0.20	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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	1,052,722	349,163	10,467

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	336,663	—
Grading	0.00	343,000	108	0.00	—
Paving	0.00	0.00	0.00	0.00	4.00

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

General Office Building	0.00	0%
Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	4.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2030	0.00	690	0.05	0.01
2031	1,440	690	0.05	0.01
2032	3,390	690	0.05	0.01
2033	2,121	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
Land Use	see assumptions

Radford - Construction Phase 3 (Onsite) - Unmitigated Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 3 (Onsite) - Unmitigated
Construction Start Date	7/1/2037
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	579	1000sqft	13.3	579,175	10,000	—	—	—

Industrial Park	53.8	1000sqft	1.23	53,780	10,000	—	—	—
Strip Mall	82.0	1000sqft	1.88	82,000	10,000	—	—	—
Enclosed Parking with Elevator	2,357	Space	21.2	587,870	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.3	43.6	84.9	0.16	1.12	30.9	31.6	1.03	3.17	4.06	16,873
Mit.	21.5	21.1	103	0.16	0.52	30.9	31.2	0.50	3.17	3.54	16,873
% Reduced	11%	52%	-21%	—	53%	—	1%	51%	—	13%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.6	61.9	115	0.23	1.50	30.9	31.9	1.38	3.17	4.43	23,162
Mit.	22.6	30.3	141	0.23	0.68	30.9	31.2	0.66	3.17	3.71	23,162
% Reduced	15%	51%	-22%	—	54%	—	2%	52%	—	16%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.8	27.6	57.1	0.11	0.67	20.4	21.1	0.62	2.07	2.68	11,036
Mit.	15.1	14.0	68.2	0.11	0.31	20.4	20.7	0.30	2.07	2.36	11,036

% Reduced	10%	49%	-19%	—	54%	—	2%	52%	—	12%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.07	5.04	10.4	0.02	0.12	3.72	3.84	0.11	0.38	0.49	1,827
Mit.	2.75	2.56	12.5	0.02	0.06	3.72	3.78	0.05	0.38	0.43	1,827
% Reduced	10%	49%	-19%	—	54%	—	2%	52%	—	12%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	5.21	43.6	84.9	0.16	1.12	30.9	31.6	1.03	3.17	4.06	16,873
2039	24.3	41.1	72.0	0.14	0.91	1.17	2.08	0.83	0.12	0.95	14,719
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	26.6	61.9	115	0.23	1.50	30.9	31.9	1.38	3.17	4.43	23,162
2039	24.3	41.1	72.0	0.14	0.95	1.17	2.12	0.87	0.12	0.99	14,720
2040	22.3	23.1	38.8	0.08	0.45	0.50	0.95	0.41	0.05	0.46	7,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2038	6.83	27.6	57.1	0.11	0.67	20.4	21.1	0.62	2.07	2.68	11,036
2039	16.8	25.3	44.1	0.09	0.57	0.61	1.18	0.52	0.06	0.59	9,152
2040	2.57	2.67	4.47	0.01	0.05	0.05	0.11	0.05	0.01	0.05	892
Annual	—	—	—	—	—	—	—	—	—	—	—
2038	1.25	5.04	10.4	0.02	0.12	3.72	3.84	0.11	0.38	0.49	1,827
2039	3.07	4.62	8.04	0.02	0.10	0.11	0.22	0.10	0.01	0.11	1,515
2040	0.47	0.49	0.82	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	148

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	2.50	21.1	103	0.16	0.52	30.9	31.2	0.50	3.17	3.54	16,873
2039	21.5	20.3	89.8	0.14	0.37	1.17	1.54	0.37	0.12	0.48	14,719
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	22.6	30.3	141	0.23	0.68	30.9	31.2	0.66	3.17	3.71	23,162
2039	21.5	20.3	89.8	0.14	0.47	1.17	1.65	0.46	0.12	0.57	14,720
2040	20.7	14.6	47.3	0.08	0.20	0.50	0.70	0.19	0.05	0.24	7,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2038	5.00	14.0	68.2	0.11	0.31	20.4	20.7	0.30	2.07	2.36	11,036
2039	15.1	11.9	55.3	0.09	0.25	0.61	0.86	0.24	0.06	0.30	9,152
2040	2.39	1.69	5.46	0.01	0.02	0.05	0.08	0.02	0.01	0.03	892
Annual	—	—	—	—	—	—	—	—	—	—	—
2038	0.91	2.56	12.5	0.02	0.06	3.72	3.78	0.05	0.38	0.43	1,827
2039	2.75	2.16	10.1	0.02	0.04	0.11	0.16	0.04	0.01	0.06	1,515
2040	0.44	0.31	1.00	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	148

3. Construction Emissions Details

3.1. Demolition (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	5.99	19.1	0.03	0.13	—	0.13	0.12	—	0.12	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.42	0.42	< 0.005	0.04	0.04	14.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	5.99	19.1	0.03	0.13	—	0.13	0.12	—	0.12	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.42	0.42	< 0.005	0.04	0.04	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	1.76	5.59	0.01	0.04	—	0.04	0.03	—	0.03	896
Demolition	—	—	—	—	—	0.38	0.38	—	0.06	0.06	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	4.26
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	1.02	< 0.005	0.01	—	0.01	0.01	—	0.01	148
Demolition	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.70
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.42	0.42	< 0.005	0.04	0.04	14.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.42	0.42	< 0.005	0.04	0.04	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.67	6.26	0.01	0.02	—	0.02	0.02	—	0.02	896
Demolition	—	—	—	—	—	0.38	0.38	—	0.06	0.06	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	4.26
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.12	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	148
Demolition	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.70
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Grading (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.47	16.9	44.9	0.08	0.50	—	0.50	0.46	—	0.46	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.24	4.71	3.95	0.01	0.01	29.1	29.1	0.01	2.91	2.92	1,011
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.47	16.9	44.9	0.08	0.50	—	0.50	0.46	—	0.46	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.20	5.02	4.05	0.01	0.01	29.1	29.1	0.01	2.91	2.92	1,023
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	12.1	32.1	0.06	0.36	—	0.36	0.33	—	0.33	5,954
Dust From Material Movement	—	—	—	—	—	0.12	0.12	—	0.01	0.01	—
Onsite truck	0.16	3.47	2.86	0.01	0.01	19.4	19.4	0.01	1.95	1.95	727
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	2.21	5.86	0.01	0.07	—	0.07	0.06	—	0.06	986

Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.63	0.52	< 0.005	< 0.005	3.55	3.55	< 0.005	0.36	0.36	120
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.4. Grading (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.03	53.9	0.08	0.20	—	0.20	0.20	—	0.20	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.24	4.71	3.95	0.01	0.01	29.1	29.1	0.01	2.91	2.92	1,011
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.03	53.9	0.08	0.20	—	0.20	0.20	—	0.20	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.20	5.02	4.05	0.01	0.01	29.1	29.1	0.01	2.91	2.92	1,023
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	5.02	38.5	0.06	0.14	—	0.14	0.14	—	0.14	5,954
Dust From Material Movement	—	—	—	—	—	0.12	0.12	—	0.01	0.01	—
Onsite truck	0.16	3.47	2.86	0.01	0.01	19.4	19.4	0.01	1.95	1.95	727
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.92	7.03	0.01	0.03	—	0.03	0.03	—	0.03	986
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.63	0.52	< 0.005	< 0.005	3.55	3.55	< 0.005	0.36	0.36	120
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.5. Foundation (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.52	1.07	< 0.005	0.06	—	0.06	0.05	—	0.05	206
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	8.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.28	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	34.1
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.42
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.6. Foundation (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.52	1.07	< 0.005	0.06	—	0.06	0.05	—	0.05	206
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	8.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.28	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	34.1
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.42
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Foundation (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.01	—	0.01	56.7
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	2.33

Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Foundation (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.01	—	0.01	56.7
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	2.33
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Building Exterior (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.01	18.0	33.2	0.07	0.46	—	0.46	0.43	—	0.43	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	40.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.01	18.0	33.2	0.07	0.46	—	0.46	0.43	—	0.43	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	41.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	5.40	9.95	0.02	0.14	—	0.14	0.13	—	0.13	2,089
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	12.3
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.99	1.82	< 0.005	0.03	—	0.03	0.02	—	0.02	346
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	2.04
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Building Exterior (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	40.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	41.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	1.64	12.7	0.02	0.05	—	0.05	0.05	—	0.05	2,089
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	12.3
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.30	2.31	< 0.005	0.01	—	0.01	0.01	—	0.01	346
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	2.04
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Building Exterior (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.99	17.6	33.0	0.07	0.44	—	0.44	0.41	—	0.41	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	40.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	17.6	33.0	0.07	0.44	—	0.44	0.41	—	0.41	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	40.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	10.5	19.6	0.04	0.26	—	0.26	0.24	—	0.24	4,151
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	24.1
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	1.92	3.59	0.01	0.05	—	0.05	0.04	—	0.04	687
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	3.98
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.12. Building Exterior (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	40.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	40.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.25	25.2	0.04	0.10	—	0.10	0.10	—	0.10	4,151
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	24.1
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.59	4.59	0.01	0.02	—	0.02	0.02	—	0.02	687
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	3.98
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Paving (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	5.55	8.80	0.01	0.09	—	0.09	0.09	—	0.09	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.1

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	5.55	8.80	0.01	0.09	—	0.09	0.09	—	0.09	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.66	2.63	< 0.005	0.03	—	0.03	0.03	—	0.03	419
Paving	0.11	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	6.05
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.30	0.48	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	69.4
Paving	0.02	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Paving (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.69	2.90	< 0.005	0.01	—	0.01	0.01	—	0.01	419
Paving	0.11	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	6.05
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.31	0.53	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	69.4
Paving	0.02	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Paving (2040) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	5.53	8.79	0.01	0.09	—	0.09	0.08	—	0.08	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.64	1.01	< 0.005	0.01	—	0.01	0.01	—	0.01	162
Paving	0.04	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	2.30
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.7
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.38
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.16. Paving (2040) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	20.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.65	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	162
Paving	0.04	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	2.30
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.7
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.38
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.17. Architectural Coating (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.13	17.9	30.1	0.06	0.38	—	0.38	0.35	—	0.35	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.3

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.22	5.42	0.01	0.07	—	0.07	0.06	—	0.06	1,128
Architectural Coatings	3.47	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	1.85
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.59	0.99	< 0.005	0.01	—	0.01	0.01	—	0.01	187
Architectural Coatings	0.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.18. Architectural Coating (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.59	6.75	0.01	0.03	—	0.03	0.03	—	0.03	1,128
Architectural Coatings	3.47	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	1.85
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.29	1.23	< 0.005	0.01	—	0.01	0.01	—	0.01	187
Architectural Coatings	0.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.19. Architectural Coating (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.11	17.6	29.9	0.06	0.37	—	0.37	0.34	—	0.34	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.11	17.6	29.9	0.06	0.37	—	0.37	0.34	—	0.34	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.2

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	12.6	21.4	0.04	0.26	—	0.26	0.24	—	0.24	4,476
Architectural Coatings	13.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.03	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	7.22
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.29	3.90	0.01	0.05	—	0.05	0.04	—	0.04	741
Architectural Coatings	2.52	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.20. Architectural Coating (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	6.32	26.8	0.04	0.11	—	0.11	0.11	—	0.11	4,476
Architectural Coatings	13.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.03	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	7.22
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.15	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	2.52	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.21. Architectural Coating (2040) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.10	17.4	29.9	0.06	0.36	—	0.36	0.33	—	0.33	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.01	3.45	0.01	0.04	—	0.04	0.04	—	0.04	723
Architectural Coatings	2.23	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.37	0.63	< 0.005	0.01	—	0.01	0.01	—	0.01	120
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.22. Architectural Coating (2040) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	1.02	4.33	0.01	0.02	—	0.02	0.02	—	0.02	723
Architectural Coatings	2.23	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.79	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	120
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2038	5/31/2038	5.00	107	—
Grading	Grading	1/1/2038	12/31/2038	5.00	261	—
Foundation	Building Construction	6/1/2038	2/28/2039	5.00	195	—
Building Exterior	Building Construction	8/1/2038	10/31/2039	5.00	326	—
Paving	Paving	8/1/2039	2/28/2040	5.00	152	—
Architectural Coating	Architectural Coating	10/1/2038	2/28/2040	5.00	368	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74

Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37

Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Foundation	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31

Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	5.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	350	0.50	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	10.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2

Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.50	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	20.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	5.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	350	0.50	HHDT
Foundation	—	—	—	—

Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	10.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.50	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	20.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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	1,114,014	362,098	55,442

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	215,973	—
Grading	55,000	567,650	119	0.00	—
Paving	0.00	0.00	0.00	0.00	21.2

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	21.2	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2038	4,830	690	0.05	0.01
2039	4,830	690	0.05	0.01
2040	1,780	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
Land Use	see assumptions

Radford - Construction Phase 4 (Onsite) 2045 - Unmitigated Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 4 (Onsite) 2045 - Unmitigated
Construction Start Date	9/1/2043
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	125	1000sqft	2.86	124,794	10,000	—	—	—

Industrial Park	69.1	1000sqft	1.59	69,120	10,000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.36	18.4	31.8	0.06	0.33	12.4	12.8	0.30	1.25	1.55	5,782
Mit.	6.83	12.2	36.3	0.06	0.23	12.4	12.7	0.22	1.25	1.47	5,782
% Reduced	7%	34%	-14%	—	31%	—	1%	29%	—	6%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.36	8.57	14.7	0.03	0.16	1.34	1.40	0.15	0.20	0.27	2,893
Mit.	6.83	4.52	17.7	0.03	0.10	1.34	1.36	0.09	0.20	0.22	2,893
% Reduced	7%	47%	-20%	—	40%	—	3%	38%	—	19%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.24	5.24	9.34	0.02	0.10	1.92	2.01	0.09	0.20	0.29	1,735
Mit.	3.11	3.08	10.9	0.02	0.06	1.92	1.98	0.06	0.20	0.26	1,735
% Reduced	4%	41%	-16%	—	36%	—	2%	33%	—	10%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.59	0.96	1.70	< 0.005	0.02	0.35	0.37	0.02	0.04	0.05	287

Mit.	0.57	0.56	1.98	< 0.005	0.01	0.35	0.36	0.01	0.04	0.05	287
% Reduced	4%	41%	-16%	—	36%	—	2%	33%	—	10%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	7.36	18.4	31.8	0.06	0.33	12.4	12.8	0.30	1.25	1.55	5,782
2045	7.00	6.94	11.3	0.02	0.08	0.53	0.62	0.07	0.05	0.13	1,761
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	7.36	8.57	14.7	0.03	0.16	1.34	1.40	0.15	0.20	0.27	2,893
2045	7.35	8.49	14.6	0.03	0.16	1.24	1.39	0.14	0.13	0.27	2,893
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2044	2.50	5.24	9.34	0.02	0.10	1.92	2.01	0.09	0.20	0.29	1,735
2045	3.24	2.42	4.03	0.01	0.03	0.22	0.25	0.03	0.02	0.05	655
Annual	—	—	—	—	—	—	—	—	—	—	—
2044	0.46	0.96	1.70	< 0.005	0.02	0.35	0.37	0.02	0.04	0.05	287
2045	0.59	0.44	0.73	< 0.005	0.01	0.04	0.05	0.01	< 0.005	0.01	108

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	6.83	12.2	36.3	0.06	0.23	12.4	12.7	0.22	1.25	1.47	5,782
2045	6.67	6.71	12.2	0.02	0.04	0.53	0.58	0.04	0.05	0.10	1,761

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	6.83	4.52	17.7	0.03	0.10	1.34	1.36	0.09	0.20	0.22	2,893
2045	6.83	4.51	17.7	0.03	0.10	1.24	1.33	0.09	0.13	0.22	2,893
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2044	2.21	3.08	10.9	0.02	0.06	1.92	1.98	0.06	0.20	0.26	1,735
2045	3.11	2.04	4.39	0.01	0.02	0.22	0.24	0.02	0.02	0.04	655
Annual	—	—	—	—	—	—	—	—	—	—	—
2044	0.40	0.56	1.98	< 0.005	0.01	0.35	0.36	0.01	0.04	0.05	287
2045	0.57	0.37	0.80	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	0.01	108

3. Construction Emissions Details

3.1. Demolition (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.13	8.72	0.01	0.05	—	0.05	0.04	—	0.04	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	8.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.13	8.72	0.01	0.05	—	0.05	0.04	—	0.04	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	8.30

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.38	1.05	< 0.005	0.01	—	0.01	0.01	—	0.01	163
Demolition	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.99
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.0
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.44	9.48	0.01	0.03	—	0.03	0.03	—	0.03	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	8.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.44	9.48	0.01	0.03	—	0.03	0.03	—	0.03	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Demolition	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.99
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.0
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Grading (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	5.81	15.0	0.02	0.13	—	0.13	0.12	—	0.12	2,370
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.23	4.23	3.82	0.01	< 0.005	11.2	11.2	< 0.005	1.13	1.13	689

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.70	1.80	< 0.005	0.02	—	0.02	0.01	—	0.01	286
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.53	0.47	< 0.005	< 0.005	1.27	1.27	< 0.005	0.13	0.13	83.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.13	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	47.3
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	13.9
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.20	16.3	0.02	0.09	—	0.09	0.08	—	0.08	2,370
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.23	4.23	3.82	0.01	< 0.005	11.2	11.2	< 0.005	1.13	1.13	689
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.39	1.97	< 0.005	0.01	—	0.01	0.01	—	0.01	286
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.53	0.47	< 0.005	< 0.005	1.27	1.27	< 0.005	0.13	0.13	83.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	47.3
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	13.9
Offsite	—	—	—	—	—	—	—	—	—	—	—

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

3.5. Foundation (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.21	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	9.48
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.22	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	29.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	1.70
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.83
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.28
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Foundation (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.21	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	9.48
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	29.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	1.70
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.83
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.28
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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 Exterior (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	6.82	12.0	0.02	0.15	—	0.15	0.14	—	0.14	2,490
Onsite truck	0.01	0.25	0.21	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	58.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	6.82	12.0	0.02	0.15	—	0.15	0.14	—	0.14	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	59.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	2.86	5.00	0.01	0.06	—	0.06	0.06	—	0.06	1,043
Onsite truck	0.01	0.11	0.09	< 0.005	< 0.005	0.41	0.41	< 0.005	0.04	0.04	24.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.52	0.91	< 0.005	0.01	—	0.01	0.01	—	0.01	173
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	4.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Building Exterior (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.01	0.25	0.21	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	58.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	59.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	1.36	6.32	0.01	0.04	—	0.04	0.04	—	0.04	1,043
Onsite truck	0.01	0.11	0.09	< 0.005	< 0.005	0.41	0.41	< 0.005	0.04	0.04	24.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	173
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	4.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Building Exterior (2045) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	6.75	11.9	0.02	0.14	—	0.14	0.13	—	0.13	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	59.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.41	0.72	< 0.005	0.01	—	0.01	0.01	—	0.01	151
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	3.55
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.59
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Building Exterior (2045) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	59.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.20	0.92	< 0.005	0.01	—	0.01	0.01	—	0.01	151
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	3.55
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.59
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Paving (2045) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	5.39	8.75	0.01	0.07	—	0.07	0.06	—	0.06	1,399
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	18.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.28	2.09	< 0.005	0.02	—	0.02	0.02	—	0.02	333
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	4.50
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.23	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	55.2
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.75
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2045) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399

Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.33	0.33	< 0.005	0.03	0.03	18.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.35	2.31	< 0.005	0.01	—	0.01	0.01	—	0.01	333
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	4.50
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.25	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	55.2
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.75
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.43	0.74	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	99.3
Architectural Coatings	1.91	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	3.42
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Architectural Coating (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332

Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.28	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	99.3
Architectural Coatings	1.91	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	3.42
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Architectural Coating (2045) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.4

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.67	1.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	156
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	5.35
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.9
Architectural Coatings	0.55	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.16. Architectural Coating (2045) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	11.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.44	1.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	156
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	5.35
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.9
Architectural Coatings	0.55	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

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

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	3/1/2044	4/30/2044	5.00	44.0	—
Grading	Grading	5/1/2044	6/30/2044	5.00	44.0	—
Foundation	Building Construction	5/1/2044	7/30/2044	5.00	65.0	—

Building Exterior	Building Construction	6/1/2044	1/31/2045	5.00	175	—
Paving	Paving	5/1/2045	8/29/2045	5.00	87.0	—
Architectural Coating	Architectural Coating	8/1/2044	8/29/2045	5.00	282	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	1.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Grading	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74

Building Exterior	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	1.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	1.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45

Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	1.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT

Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	6.00	0.50	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	6.00	0.50	HHDT,MHDT

Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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	290,871	96,957	—

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	83,219	—
Grading	0.00	22,500	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.50

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.50	0%
Industrial Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2044	255	690	0.05	0.01
2045	255	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions

Radford - Construction Phase 1 (Onsite) - Mitigated Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 1 (Onsite) - Mitigated
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Strip Mall	61.6	1000sqft	1.41	61,560	10,000	—	—	—

Enclosed Parking with Elevator	1,078	Space	9.70	304,020	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.86	54.9	68.9	0.13	2.06	0.15	2.21	1.90	0.02	1.91	13,513
Mit.	4.82	16.0	81.7	0.13	0.38	0.15	0.52	0.37	0.02	0.38	13,513
% Reduced	46%	71%	-19%	—	82%	—	76%	81%	—	80%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.89	61.5	85.4	0.15	2.57	0.91	2.88	2.37	0.13	2.40	16,075
Mit.	4.36	17.9	101	0.15	0.57	0.91	1.33	0.55	0.13	0.58	16,075
% Reduced	37%	71%	-18%	—	78%	—	54%	77%	—	76%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.61	29.1	37.6	0.07	1.11	0.14	1.23	1.02	0.02	1.04	7,257
Mit.	2.49	9.02	44.3	0.07	0.23	0.14	0.35	0.22	0.02	0.24	7,257
% Reduced	46%	69%	-18%	—	79%	—	71%	78%	—	77%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.84	5.30	6.86	0.01	0.20	0.03	0.23	0.19	< 0.005	0.19	1,201
Mit.	0.45	1.65	8.08	0.01	0.04	0.03	0.06	0.04	< 0.005	0.04	1,201
% Reduced	46%	69%	-18%	—	79%	—	71%	78%	—	77%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2026	8.86	54.9	68.9	0.13	2.06	0.15	2.21	1.90	0.02	1.91	13,513
2027	6.78	31.1	41.0	0.08	1.02	0.04	1.06	0.94	< 0.005	0.94	7,686
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	4.77	41.0	65.4	0.11	1.85	0.90	2.74	1.70	0.13	1.82	11,412
2026	6.89	61.5	85.4	0.15	2.57	0.91	2.88	2.37	0.13	2.40	16,075
2027	6.78	31.1	41.0	0.08	1.02	0.04	1.06	0.94	< 0.005	0.94	7,686
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.43	3.69	6.26	0.01	0.17	0.14	0.31	0.15	0.02	0.17	1,060
2026	4.61	29.1	37.6	0.07	1.11	0.12	1.23	1.02	0.01	1.04	7,257
2027	1.59	7.31	9.63	0.02	0.24	0.01	0.25	0.22	< 0.005	0.22	1,808
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.67	1.14	< 0.005	0.03	0.03	0.06	0.03	< 0.005	0.03	175
2026	0.84	5.30	6.86	0.01	0.20	0.02	0.23	0.19	< 0.005	0.19	1,201
2027	0.29	1.33	1.76	< 0.005	0.04	< 0.005	0.05	0.04	< 0.005	0.04	299

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2026	4.82	16.0	81.7	0.13	0.38	0.15	0.52	0.37	0.02	0.38	13,513
2027	4.36	14.6	47.3	0.08	0.20	0.04	0.24	0.20	< 0.005	0.20	7,686
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.27	9.52	75.4	0.11	0.26	0.90	1.16	0.26	0.13	0.38	11,412
2026	3.82	17.9	101	0.15	0.57	0.91	1.33	0.55	0.13	0.58	16,075
2027	4.36	14.6	47.3	0.08	0.20	0.04	0.24	0.20	< 0.005	0.20	7,686
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.11	0.86	7.13	0.01	0.02	0.14	0.16	0.02	0.02	0.04	1,060
2026	2.49	9.02	44.3	0.07	0.23	0.12	0.35	0.22	0.01	0.24	7,257
2027	1.02	3.43	11.1	0.02	0.05	0.01	0.06	0.05	< 0.005	0.05	1,808
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.02	0.16	1.30	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	0.01	175
2026	0.45	1.65	8.08	0.01	0.04	0.02	0.06	0.04	< 0.005	0.04	1,201
2027	0.19	0.63	2.03	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	299

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	9.93	19.2	0.03	0.45	—	0.45	0.41	—	0.41	3,058
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	1.79	3.45	0.01	0.08	—	0.08	0.07	—	0.07	551
Demolition	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.63	< 0.005	0.01	—	0.01	0.01	—	0.01	91.2
Demolition	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	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

3.2. Demolition (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,058
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.41	3.85	0.01	0.01	—	0.01	0.01	—	0.01	551
Demolition	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	91.2
Demolition	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Demolition (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	9.11	19.1	0.03	0.39	—	0.39	0.35	—	0.35	3,057
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	20.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.55	1.16	< 0.005	0.02	—	0.02	0.02	—	0.02	185
Demolition	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.21

Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.7
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.4. Demolition (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.67	0.67	—	0.10	0.10	—
Onsite truck	< 0.005	0.12	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	20.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	1.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	185
Demolition	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.21
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.7
Demolition	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	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

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.58	30.9	46.1	0.08	1.39	—	1.39	1.28	—	1.28	8,324
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	10.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	1.87	2.79	< 0.005	0.08	—	0.08	0.08	—	0.08	505
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.34	0.51	< 0.005	0.02	—	0.02	0.01	—	0.01	83.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10

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

3.6. Grading (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.06	53.9	0.08	0.21	—	0.21	0.20	—	0.20	8,324
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—

Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	10.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.43	3.27	< 0.005	0.01	—	0.01	0.01	—	0.01	505
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.60	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	83.6
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Grading (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.38	28.4	45.9	0.08	1.24	—	1.24	1.14	—	1.14	8,326
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.28	5.30	0.01	0.14	—	0.14	0.13	—	0.13	961
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.60	0.97	< 0.005	0.03	—	0.03	0.02	—	0.02	159
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Grading (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.05	53.9	0.08	0.20	—	0.20	0.20	—	0.20	8,326
Dust From Material Movement	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	10.0

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.81	6.22	0.01	0.02	—	0.02	0.02	—	0.02	961
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.15	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	159
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Foundation (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.87	0.61	< 0.005	0.04	—	0.04	0.03	—	0.03	116
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	19.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Foundation (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.71	2.58	0.01	0.15	—	0.15	0.14	—	0.14	491
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.87	0.61	< 0.005	0.04	—	0.04	0.03	—	0.03	116

Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.63
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	19.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Building Exterior (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.01	0.26	0.20	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	44.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.00	29.0	36.6	0.07	1.18	—	1.18	1.09	—	1.09	7,188
Onsite truck	0.01	0.27	0.21	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	45.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	11.9	15.1	0.03	0.49	—	0.49	0.45	—	0.45	2,954
Onsite truck	0.01	0.11	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	18.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	2.18	2.75	0.01	0.09	—	0.09	0.08	—	0.08	489
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.12. Building Exterior (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	6.79	44.0	0.07	0.21	—	0.21	0.21	—	0.21	7,188
Onsite truck	0.01	0.26	0.20	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	44.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	6.79	44.0	0.07	0.21	—	0.21	0.21	—	0.21	7,188
Onsite truck	0.01	0.27	0.21	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	45.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.41	2.79	18.1	0.03	0.09	—	0.09	0.09	—	0.09	2,954
Onsite truck	0.01	0.11	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	18.5
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.51	3.30	0.01	0.02	—	0.02	0.02	—	0.02	489
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Paving (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.73	6.42	9.04	0.01	0.22	—	0.22	0.20	—	0.20	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	6.42	9.04	0.01	0.22	—	0.22	0.20	—	0.20	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.51	2.13	< 0.005	0.05	—	0.05	0.05	—	0.05	330
Paving	0.07	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.28	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	54.6
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Paving (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.30	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.33	2.29	< 0.005	0.01	—	0.01	0.01	—	0.01	330

Paving	0.07	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.61
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.24	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	54.6
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.27
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.90
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.83	25.6	32.0	0.06	0.88	—	0.88	0.81	—	0.81	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	12.3	15.3	0.03	0.42	—	0.42	0.39	—	0.39	3,004
Architectural Coatings	1.44	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.32
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	2.24	2.80	0.01	0.08	—	0.08	0.07	—	0.07	497
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.55
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.16. Architectural Coating (2026) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.90

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.95
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	4.26	18.0	0.03	0.08	—	0.08	0.08	—	0.08	3,004
Architectural Coatings	1.44	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.32
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.78	3.28	0.01	0.01	—	0.01	0.01	—	0.01	497
Architectural Coatings	0.26	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.55
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.17. Architectural Coating (2027) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.74	24.6	31.9	0.06	0.80	—	0.80	0.74	—	0.74	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	5.78	7.48	0.01	0.19	—	0.19	0.17	—	0.17	1,471

Architectural Coatings	0.71	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.05	1.37	< 0.005	0.03	—	0.03	0.03	—	0.03	244
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.26
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.18. Architectural Coating (2027) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	8.87	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,265
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	6.85
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	2.08	8.81	0.01	0.04	—	0.04	0.04	—	0.04	1,471
Architectural Coatings	0.71	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.38	1.61	< 0.005	0.01	—	0.01	0.01	—	0.01	244
Architectural Coatings	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.26
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

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

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	1/31/2026	5.00	88.0	—
Grading	Grading	12/1/2025	2/28/2026	5.00	65.0	—
Foundation	Building Construction	1/1/2026	4/30/2026	5.00	86.0	—
Building Exterior	Building Construction	2/1/2026	8/30/2026	5.00	150	—
Paving	Paving	1/1/2027	4/30/2027	5.00	86.0	—

Architectural Coating	Architectural Coating	5/1/2026	4/30/2027	5.00	261	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20

Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37

Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Foundation	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82

Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	10.0	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	29.0	HHDT
Demolition	Onsite truck	8.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	4.00	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT

Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	4.00	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	4.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	4.00	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	26.0	0.20	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	29.0	HHDT
Demolition	Onsite truck	8.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2

Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	29.0	HHDT
Grading	Onsite truck	4.00	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	4.00	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	4.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	4.00	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	26.0	0.20	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	111,358	32,893	25,357

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	93,091	—
Grading	0.00	1,850	33.0	0.00	—
Paving	0.00	0.00	0.00	0.00	9.70

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Strip Mall	0.00	0%
Enclosed Parking with Elevator	9.70	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	690	0.05	0.01
2026	5,511	690	0.05	0.01
2027	2,121	690	0.05	0.01

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)

8. User Changes to Default Data

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Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
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Radford - Construction Phase 2 (Onsite) - Mitigated Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 2 (Onsite) - Mitigated
Construction Start Date	11/1/2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	497	1000sqft	11.4	496,601	10,000	—	—	—

Industrial Park	104	1000sqft	2.38	103,680	10,000	—	—	—
Strip Mall	96.3	1000sqft	2.21	96,300	10,000	—	—	—
Enclosed Parking with Elevator	445	Space	4.00	304,020	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.3	37.8	66.6	0.12	1.14	4.29	5.43	1.04	0.47	1.52	11,952
Mit.	16.6	19.2	75.8	0.12	0.39	4.29	4.68	0.37	0.47	0.84	11,952
% Reduced	10%	49%	-14%	—	66%	—	14%	65%	—	45%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.3	39.8	60.3	0.11	1.18	3.73	4.91	1.09	0.38	1.47	11,418
Mit.	16.4	20.7	69.7	0.11	0.42	3.73	4.15	0.40	0.38	0.78	11,418
% Reduced	10%	48%	-16%	—	65%	—	16%	63%	—	47%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.4	18.3	32.2	0.06	0.54	1.81	2.35	0.49	0.20	0.70	5,765
Mit.	10.5	8.71	36.7	0.06	0.20	1.81	1.98	0.19	0.20	0.36	5,765

% Reduced	8%	52%	-14%	—	63%	—	16%	62%	—	48%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.08	3.34	5.87	0.01	0.10	0.33	0.43	0.09	0.04	0.13	955
Mit.	1.91	1.59	6.70	0.01	0.04	0.33	0.36	0.03	0.04	0.07	955
% Reduced	8%	52%	-14%	—	63%	—	16%	62%	—	48%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.98	7.81	19.4	0.03	0.26	0.76	1.02	0.24	0.11	0.35	3,103
2031	4.31	37.8	66.6	0.12	1.14	4.29	5.43	1.04	0.47	1.52	11,952
2032	18.2	27.3	37.8	0.08	0.79	0.34	1.13	0.72	0.04	0.76	7,496
2033	18.3	28.9	44.1	0.08	0.73	0.34	1.07	0.67	0.04	0.71	8,402
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.98	7.82	19.4	0.03	0.26	0.76	1.02	0.24	0.11	0.35	3,104
2031	4.30	39.8	60.3	0.11	1.18	3.73	4.91	1.09	0.38	1.47	11,418
2032	17.7	38.6	60.1	0.11	1.10	3.73	4.83	1.01	0.38	1.40	11,404
2033	18.3	29.0	44.1	0.08	0.73	0.34	1.07	0.67	0.04	0.71	8,403
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2030	0.41	3.27	8.12	0.01	0.11	0.31	0.42	0.10	0.04	0.15	1,300
2031	2.02	17.9	32.2	0.06	0.54	1.81	2.35	0.49	0.20	0.70	5,765
2032	10.1	18.3	27.1	0.05	0.52	0.55	1.07	0.48	0.06	0.53	5,327
2033	11.4	13.6	20.9	0.04	0.34	0.11	0.45	0.31	0.01	0.32	4,056
Annual	—	—	—	—	—	—	—	—	—	—	—
2030	0.07	0.60	1.48	< 0.005	0.02	0.06	0.08	0.02	0.01	0.03	215

2031	0.37	3.28	5.87	0.01	0.10	0.33	0.43	0.09	0.04	0.13	955
2032	1.85	3.34	4.95	0.01	0.09	0.10	0.20	0.09	0.01	0.10	882
2033	2.08	2.49	3.82	0.01	0.06	0.02	0.08	0.06	< 0.005	0.06	671

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.31	2.55	21.6	0.03	0.06	0.76	0.82	0.06	0.11	0.17	3,103
2031	1.96	19.2	75.8	0.12	0.39	4.29	4.68	0.37	0.47	0.84	11,952
2032	16.6	13.9	44.6	0.08	0.36	0.34	0.70	0.34	0.04	0.38	7,496
2033	16.4	15.9	51.8	0.08	0.26	0.34	0.59	0.25	0.04	0.28	8,402
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2030	0.31	2.56	21.6	0.03	0.06	0.76	0.82	0.06	0.11	0.17	3,104
2031	2.01	20.7	69.7	0.11	0.42	3.73	4.15	0.40	0.38	0.78	11,418
2032	16.1	20.6	69.7	0.11	0.42	3.73	4.15	0.40	0.38	0.78	11,404
2033	16.4	15.9	51.8	0.08	0.26	0.34	0.59	0.25	0.04	0.28	8,403
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2030	0.13	1.07	9.04	0.01	0.02	0.31	0.34	0.02	0.04	0.07	1,300
2031	0.86	8.61	36.7	0.06	0.17	1.81	1.98	0.16	0.20	0.36	5,765
2032	9.00	8.71	32.1	0.05	0.20	0.55	0.75	0.19	0.06	0.25	5,327
2033	10.5	6.99	24.7	0.04	0.12	0.11	0.23	0.12	0.01	0.13	4,056
Annual	—	—	—	—	—	—	—	—	—	—	—
2030	0.02	0.20	1.65	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	215
2031	0.16	1.57	6.70	0.01	0.03	0.33	0.36	0.03	0.04	0.07	955
2032	1.64	1.59	5.85	0.01	0.04	0.10	0.14	0.03	0.01	0.04	882

2033	1.91	1.28	4.51	0.01	0.02	0.02	0.04	0.02	< 0.005	0.02	671

3. Construction Emissions Details

3.1. Demolition (2030) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.53	19.2	0.03	0.26	—	0.26	0.24	—	0.24	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.28	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	46.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.53	19.2	0.03	0.26	—	0.26	0.24	—	0.24	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	46.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.16	8.03	0.01	0.11	—	0.11	0.10	—	0.10	1,280
Demolition	—	—	—	—	—	0.26	0.26	—	0.04	0.04	—
Onsite truck	0.01	0.12	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.58	1.47	< 0.005	0.02	—	0.02	0.02	—	0.02	212
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—

Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.23
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2030) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057

Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.28	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	46.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	46.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.95	8.95	0.01	0.02	—	0.02	0.02	—	0.02	1,280
Demolition	—	—	—	—	—	0.26	0.26	—	0.04	0.04	—
Onsite truck	0.01	0.12	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	1.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	212
Demolition	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	3.23
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Demolition (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.93	7.22	19.2	0.03	0.24	—	0.24	0.22	—	0.22	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	45.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.93	7.22	19.2	0.03	0.24	—	0.24	0.22	—	0.22	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	46.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	3.86	10.2	0.02	0.13	—	0.13	0.12	—	0.12	1,633
Demolition	—	—	—	—	—	0.33	0.33	—	0.05	0.05	—
Onsite truck	0.01	0.15	0.12	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	24.5

Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.70	1.87	< 0.005	0.02	—	0.02	0.02	—	0.02	270
Demolition	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	4.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.4. Demolition (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	45.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—
Onsite truck	0.01	0.29	0.22	< 0.005	< 0.005	0.14	0.14	< 0.005	0.01	0.01	46.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.21	11.4	0.02	0.03	—	0.03	0.03	—	0.03	1,633
Demolition	—	—	—	—	—	0.33	0.33	—	0.05	0.05	—
Onsite truck	0.01	0.15	0.12	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	24.5
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	2.08	< 0.005	0.01	—	0.01	0.01	—	0.01	270
Demolition	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	4.06
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.5. Grading (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.57	20.1	39.4	0.07	0.75	—	0.75	0.69	—	0.69	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.30	6.34	5.09	0.01	< 0.005	3.28	3.28	< 0.005	0.34	0.34	1,063
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.57	20.1	39.4	0.07	0.75	—	0.75	0.69	—	0.69	7,261

Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.70	5.23	0.01	< 0.005	3.28	3.28	< 0.005	0.34	0.34	1,078
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	8.44	16.5	0.03	0.31	—	0.31	0.29	—	0.29	3,041
Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	0.12	2.72	2.16	0.01	< 0.005	1.28	1.29	< 0.005	0.13	0.13	448
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.54	3.01	0.01	0.06	—	0.06	0.05	—	0.05	503
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.02	0.50	0.39	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	74.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.6. Grading (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	6.51	46.4	0.07	0.18	—	0.18	0.18	—	0.18	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.30	6.34	5.09	0.01	< 0.005	3.28	3.28	< 0.005	0.34	0.34	1,063
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	6.51	46.4	0.07	0.18	—	0.18	0.18	—	0.18	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.70	5.23	0.01	< 0.005	3.28	3.28	< 0.005	0.34	0.34	1,078
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	2.72	19.4	0.03	0.08	—	0.08	0.07	—	0.07	3,041

Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	0.12	2.72	2.16	0.01	< 0.005	1.28	1.29	< 0.005	0.13	0.13	448
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.50	3.55	0.01	0.01	—	0.01	0.01	—	0.01	503
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.02	0.50	0.39	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	74.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Grading (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.49	19.3	39.3	0.07	0.69	—	0.69	0.64	—	0.64	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.64	5.24	0.01	< 0.005	3.28	3.28	< 0.005	0.34	0.34	1,063
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.23	4.53	0.01	0.08	—	0.08	0.07	—	0.07	838
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.74	0.60	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	122
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.41	0.83	< 0.005	0.01	—	0.01	0.01	—	0.01	139
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.14	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Grading (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	6.51	46.4	0.07	0.18	—	0.18	0.18	—	0.18	7,261
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.26	6.64	5.24	0.01	< 0.005	3.28	3.28	< 0.005	0.34	0.34	1,063
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.75	5.36	0.01	0.02	—	0.02	0.02	—	0.02	838
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.74	0.60	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	122
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.98	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	139
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.14	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Foundation (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.09	0.77	< 0.005	0.04	—	0.04	0.04	—	0.04	147
Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.50
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.4
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Foundation (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.09	0.77	< 0.005	0.04	—	0.04	0.04	—	0.04	147

Onsite truck	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.50
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.4
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Foundation (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.08	0.76	< 0.005	0.04	—	0.04	0.04	—	0.04	145
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.20
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.0
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.52
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.12. Foundation (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.18	0.14	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.65	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	0.01	0.19	0.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	31.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.08	0.76	< 0.005	0.04	—	0.04	0.04	—	0.04	145
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.20
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.20	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	24.0
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.52
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Building Exterior (2031) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	8.69	12.7	0.02	0.28	—	0.28	0.26	—	0.26	2,490
Onsite truck	0.02	0.38	0.30	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	63.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.56	2.28	< 0.005	0.05	—	0.05	0.05	—	0.05	448
Onsite truck	< 0.005	0.07	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	11.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.29	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	74.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Building Exterior (2031) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.38	0.30	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	63.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.59	2.72	< 0.005	0.02	—	0.02	0.02	—	0.02	448
Onsite truck	< 0.005	0.07	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	11.4
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.11	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	74.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Building Exterior (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	8.42	12.6	0.02	0.26	—	0.26	0.24	—	0.24	2,490
Onsite truck	0.02	0.36	0.29	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	62.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	8.42	12.6	0.02	0.26	—	0.26	0.24	—	0.24	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	62.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	6.03	9.01	0.02	0.19	—	0.19	0.17	—	0.17	1,784
Onsite truck	0.01	0.26	0.21	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.10	1.64	< 0.005	0.03	—	0.03	0.03	—	0.03	295
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	7.39

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

3.16. Building Exterior (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.36	0.29	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	62.0

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	62.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.33	10.8	0.02	0.07	—	0.07	0.06	—	0.06	1,784
Onsite truck	0.01	0.26	0.21	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	44.6
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.43	1.97	< 0.005	0.01	—	0.01	0.01	—	0.01	295
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	7.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	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

3.17. Building Exterior (2033) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	8.19	12.6	0.02	0.24	—	0.24	0.22	—	0.22	2,490
Onsite truck	0.02	0.35	0.28	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	60.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	8.19	12.6	0.02	0.24	—	0.24	0.22	—	0.22	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	61.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.40	3.69	0.01	0.07	—	0.07	0.06	—	0.06	731
Onsite truck	< 0.005	0.11	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	18.0
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.44	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	121
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.98
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.18. Building Exterior (2033) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.35	0.28	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	60.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.02	0.37	0.30	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	61.7

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.96	4.43	0.01	0.03	—	0.03	0.03	—	0.03	731
Onsite truck	< 0.005	0.11	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	18.0
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	0.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	121
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.98
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.19. Paving (2033) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	5.87	8.90	0.01	0.14	—	0.14	0.13	—	0.13	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	30.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	5.87	8.90	0.01	0.14	—	0.14	0.13	—	0.13	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	30.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.70	2.59	< 0.005	0.04	—	0.04	0.04	—	0.04	406
Paving	0.03	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	8.89
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.31	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	67.3
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.47
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.20. Paving (2033) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	30.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	30.8
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.64	2.82	< 0.005	0.01	—	0.01	0.01	—	0.01	406
Paving	0.03	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	8.89
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.30	0.51	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	67.3
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.47
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.21. Architectural Coating (2032) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	14.6	22.1	0.04	0.38	—	0.38	0.35	—	0.35	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.66	14.6	22.1	0.04	0.38	—	0.38	0.35	—	0.35	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	7.87	11.9	0.02	0.21	—	0.21	0.19	—	0.19	2,369
Architectural Coatings	8.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.38
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	1.44	2.18	< 0.005	0.04	—	0.04	0.03	—	0.03	392
Architectural Coatings	1.48	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.22. Architectural Coating (2032) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	3.44	14.3	0.02	0.07	—	0.07	0.07	—	0.07	2,369
Architectural Coatings	8.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.38
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.63	2.60	< 0.005	0.01	—	0.01	0.01	—	0.01	392
Architectural Coatings	1.48	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.23. Architectural Coating (2033) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.3	22.1	0.04	0.35	—	0.35	0.32	—	0.32	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.3	22.1	0.04	0.35	—	0.35	0.32	—	0.32	4,403

Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	9.32	14.5	0.03	0.23	—	0.23	0.21	—	0.21	2,878
Architectural Coatings	9.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.06	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	10.0
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.70	2.64	0.01	0.04	—	0.04	0.04	—	0.04	476
Architectural Coatings	1.80	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.66
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.24. Architectural Coating (2033) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	6.39	26.5	0.04	0.13	—	0.13	0.12	—	0.12	4,403
Architectural Coatings	15.1	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	15.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	4.18	17.3	0.03	0.08	—	0.08	0.08	—	0.08	2,878
Architectural Coatings	9.84	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.06	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	10.0
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.76	3.16	0.01	0.02	—	0.02	0.01	—	0.01	476
Architectural Coatings	1.80	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.66
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	6/1/2030	9/30/2031	5.00	347	—
Grading	Grading	6/1/2031	2/28/2032	5.00	195	—
Foundation	Building Construction	8/1/2031	5/30/2032	5.00	216	—
Building Exterior	Building Construction	10/1/2031	5/30/2033	5.00	434	—
Paving	Paving	1/1/2033	5/30/2033	5.00	106	—
Architectural Coating	Architectural Coating	4/1/2032	11/30/2033	5.00	435	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41

Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	4.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	8.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	2.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	3.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38

Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	2.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Foundation	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36

Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	4.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	8.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Tier 4 Final	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	3.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	35.0	HHDT
Demolition	Onsite truck	20.0	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	466	0.20	HHDT
Foundation	—	—	—	—

Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	20.0	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	20.0	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	10.0	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	40.0	0.20	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	35.0	HHDT
Demolition	Onsite truck	20.0	0.20	HHDT

Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	466	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	20.0	0.20	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	20.0	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	10.0	0.20	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	40.0	0.20	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	1,052,722	349,163	10,467

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	336,663	—
Grading	0.00	343,000	108	0.00	—
Paving	0.00	0.00	0.00	0.00	4.00

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

General Office Building	0.00	0%
Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	4.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2030	0.00	690	0.05	0.01
2031	1,440	690	0.05	0.01
2032	3,390	690	0.05	0.01
2033	2,121	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
Land Use	see assumptions

Radford - Construction Phase 3 (Onsite) - Mitigated Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 3 (Onsite) - Mitigated
Construction Start Date	7/1/2037
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	579	1000sqft	13.3	579,175	10,000	—	—	—

Industrial Park	53.8	1000sqft	1.23	53,780	10,000	—	—	—
Strip Mall	82.0	1000sqft	1.88	82,000	10,000	—	—	—
Enclosed Parking with Elevator	2,357	Space	21.2	587,870	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	24.3	43.6	84.9	0.16	1.12	7.70	8.34	1.03	0.85	1.72	16,873
Mit.	21.5	21.1	103	0.16	0.52	7.70	7.96	0.50	0.85	1.19	16,873
% Reduced	11%	52%	-21%	—	53%	—	4%	51%	—	31%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	26.6	61.9	115	0.23	1.50	7.70	8.34	1.38	0.85	2.07	23,162
Mit.	22.6	30.3	141	0.23	0.68	7.70	7.96	0.66	0.85	1.35	23,162
% Reduced	15%	51%	-22%	—	54%	—	4%	52%	—	35%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.8	27.6	57.1	0.11	0.67	4.77	5.44	0.62	0.51	1.13	11,036
Mit.	15.1	14.0	68.2	0.11	0.31	4.77	5.07	0.30	0.51	0.81	11,036

% Reduced	10%	49%	-19%	—	54%	—	7%	52%	—	28%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.07	5.04	10.4	0.02	0.12	0.87	0.99	0.11	0.09	0.21	1,827
Mit.	2.75	2.56	12.5	0.02	0.06	0.87	0.93	0.05	0.09	0.15	1,827
% Reduced	10%	49%	-19%	—	54%	—	7%	52%	—	28%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	5.21	43.6	84.9	0.16	1.12	7.70	8.34	1.03	0.85	1.72	16,873
2039	24.3	41.1	72.0	0.14	0.91	0.42	1.33	0.83	0.04	0.88	14,719
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	26.6	61.9	115	0.23	1.50	7.70	8.34	1.38	0.85	2.07	23,162
2039	24.3	41.1	72.0	0.14	0.95	0.42	1.37	0.87	0.04	0.92	14,720
2040	22.3	23.1	38.8	0.08	0.45	0.18	0.63	0.41	0.02	0.43	7,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2038	6.83	27.6	57.1	0.11	0.67	4.77	5.44	0.62	0.51	1.13	11,036
2039	16.8	25.3	44.1	0.09	0.57	0.22	0.79	0.52	0.02	0.55	9,152
2040	2.57	2.67	4.47	0.01	0.05	0.02	0.07	0.05	< 0.005	0.05	892
Annual	—	—	—	—	—	—	—	—	—	—	—
2038	1.25	5.04	10.4	0.02	0.12	0.87	0.99	0.11	0.09	0.21	1,827
2039	3.07	4.62	8.04	0.02	0.10	0.04	0.14	0.10	< 0.005	0.10	1,515
2040	0.47	0.49	0.82	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	148

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	2.50	21.1	103	0.16	0.52	7.70	7.96	0.50	0.85	1.19	16,873
2039	21.5	20.3	89.8	0.14	0.37	0.42	0.80	0.37	0.04	0.41	14,719
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2038	22.6	30.3	141	0.23	0.68	7.70	7.96	0.66	0.85	1.35	23,162
2039	21.5	20.3	89.8	0.14	0.47	0.42	0.90	0.46	0.04	0.50	14,720
2040	20.7	14.6	47.3	0.08	0.20	0.18	0.38	0.19	0.02	0.21	7,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2038	5.00	14.0	68.2	0.11	0.31	4.77	5.07	0.30	0.51	0.81	11,036
2039	15.1	11.9	55.3	0.09	0.25	0.22	0.47	0.24	0.02	0.26	9,152
2040	2.39	1.69	5.46	0.01	0.02	0.02	0.04	0.02	< 0.005	0.02	892
Annual	—	—	—	—	—	—	—	—	—	—	—
2038	0.91	2.56	12.5	0.02	0.06	0.87	0.93	0.05	0.09	0.15	1,827
2039	2.75	2.16	10.1	0.02	0.04	0.04	0.09	0.04	< 0.005	0.05	1,515
2040	0.44	0.31	1.00	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	148

3. Construction Emissions Details

3.1. Demolition (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	5.99	19.1	0.03	0.13	—	0.13	0.12	—	0.12	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	14.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	5.99	19.1	0.03	0.13	—	0.13	0.12	—	0.12	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	1.76	5.59	0.01	0.04	—	0.04	0.03	—	0.03	896
Demolition	—	—	—	—	—	0.38	0.38	—	0.06	0.06	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	4.26
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	1.02	< 0.005	0.01	—	0.01	0.01	—	0.01	148
Demolition	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.70
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	14.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.27	21.4	0.03	0.06	—	0.06	0.06	—	0.06	3,057
Demolition	—	—	—	—	—	1.28	1.28	—	0.19	0.19	—
Onsite truck	< 0.005	0.07	0.06	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.09	0.67	6.26	0.01	0.02	—	0.02	0.02	—	0.02	896
Demolition	—	—	—	—	—	0.38	0.38	—	0.06	0.06	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	4.26
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.12	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	148
Demolition	—	—	—	—	—	0.07	0.07	—	0.01	0.01	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.70
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Grading (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.47	16.9	44.9	0.08	0.50	—	0.50	0.46	—	0.46	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.24	4.71	3.95	0.01	0.01	6.15	6.16	0.01	0.63	0.64	1,011
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.47	16.9	44.9	0.08	0.50	—	0.50	0.46	—	0.46	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.20	5.02	4.05	0.01	0.01	6.15	6.16	0.01	0.63	0.64	1,023
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	12.1	32.1	0.06	0.36	—	0.36	0.33	—	0.33	5,954
Dust From Material Movement	—	—	—	—	—	0.12	0.12	—	0.01	0.01	—
Onsite truck	0.16	3.47	2.86	0.01	0.01	4.12	4.12	0.01	0.42	0.43	727
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	2.21	5.86	0.01	0.07	—	0.07	0.06	—	0.06	986

Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.63	0.52	< 0.005	< 0.005	0.75	0.75	< 0.005	0.08	0.08	120
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.4. Grading (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.03	53.9	0.08	0.20	—	0.20	0.20	—	0.20	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.24	4.71	3.95	0.01	0.01	6.15	6.16	0.01	0.63	0.64	1,011
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	7.03	53.9	0.08	0.20	—	0.20	0.20	—	0.20	8,326
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.02	0.02	—
Onsite truck	0.20	5.02	4.05	0.01	0.01	6.15	6.16	0.01	0.63	0.64	1,023
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	5.02	38.5	0.06	0.14	—	0.14	0.14	—	0.14	5,954
Dust From Material Movement	—	—	—	—	—	0.12	0.12	—	0.01	0.01	—
Onsite truck	0.16	3.47	2.86	0.01	0.01	4.12	4.12	0.01	0.42	0.43	727
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.92	7.03	0.01	0.03	—	0.03	0.03	—	0.03	986
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.63	0.52	< 0.005	< 0.005	0.75	0.75	< 0.005	0.08	0.08	120
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.5. Foundation (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.52	1.07	< 0.005	0.06	—	0.06	0.05	—	0.05	206
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	0.01	8.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.28	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	34.1
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.42
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.6. Foundation (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	1.52	1.07	< 0.005	0.06	—	0.06	0.05	—	0.05	206
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	0.01	8.60
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.28	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	34.1
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.42
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.7. Foundation (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.01	—	0.01	56.7
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.33

Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Foundation (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.48	3.64	2.56	0.01	0.14	—	0.14	0.13	—	0.13	491
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.42	0.30	< 0.005	0.02	—	0.02	0.01	—	0.01	56.7
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.33
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.39
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.39
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Building Exterior (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.01	18.0	33.2	0.07	0.46	—	0.46	0.43	—	0.43	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	40.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.01	18.0	33.2	0.07	0.46	—	0.46	0.43	—	0.43	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	41.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	5.40	9.95	0.02	0.14	—	0.14	0.13	—	0.13	2,089
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	12.3
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.99	1.82	< 0.005	0.03	—	0.03	0.02	—	0.02	346
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.04
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Building Exterior (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	40.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	41.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	1.64	12.7	0.02	0.05	—	0.05	0.05	—	0.05	2,089
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	12.3
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.30	2.31	< 0.005	0.01	—	0.01	0.01	—	0.01	346
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.04
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Building Exterior (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.99	17.6	33.0	0.07	0.44	—	0.44	0.41	—	0.41	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	40.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	17.6	33.0	0.07	0.44	—	0.44	0.41	—	0.41	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	40.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	10.5	19.6	0.04	0.26	—	0.26	0.24	—	0.24	4,151
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	24.1
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	1.92	3.59	0.01	0.05	—	0.05	0.04	—	0.04	687
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.98
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.12. Building Exterior (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.17	0.14	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	40.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	5.46	42.3	0.07	0.17	—	0.17	0.17	—	0.17	6,978
Onsite truck	0.01	0.18	0.15	< 0.005	< 0.005	0.24	0.24	< 0.005	0.03	0.03	40.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	3.25	25.2	0.04	0.10	—	0.10	0.10	—	0.10	4,151
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	24.1
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.59	4.59	0.01	0.02	—	0.02	0.02	—	0.02	687
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.98
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.13. Paving (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	5.55	8.80	0.01	0.09	—	0.09	0.09	—	0.09	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.1

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	5.55	8.80	0.01	0.09	—	0.09	0.09	—	0.09	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.66	2.63	< 0.005	0.03	—	0.03	0.03	—	0.03	419
Paving	0.11	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	6.05
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.30	0.48	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	69.4
Paving	0.02	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Paving (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	1.69	2.90	< 0.005	0.01	—	0.01	0.01	—	0.01	419
Paving	0.11	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	6.05
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.31	0.53	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	69.4
Paving	0.02	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Paving (2040) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	5.53	8.79	0.01	0.09	—	0.09	0.08	—	0.08	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.64	1.01	< 0.005	0.01	—	0.01	0.01	—	0.01	162
Paving	0.04	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.30
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.7
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.38
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.16. Paving (2040) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399
Paving	0.37	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	20.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.65	1.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	162
Paving	0.04	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.30
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	26.7
Paving	0.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.38
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.17. Architectural Coating (2038) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.13	17.9	30.1	0.06	0.38	—	0.38	0.35	—	0.35	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.3

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.22	5.42	0.01	0.07	—	0.07	0.06	—	0.06	1,128
Architectural Coatings	3.47	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.85
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.59	0.99	< 0.005	0.01	—	0.01	0.01	—	0.01	187
Architectural Coatings	0.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.18. Architectural Coating (2038) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.59	6.75	0.01	0.03	—	0.03	0.03	—	0.03	1,128
Architectural Coatings	3.47	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.85
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.29	1.23	< 0.005	0.01	—	0.01	0.01	—	0.01	187
Architectural Coatings	0.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.31
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.19. Architectural Coating (2039) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.11	17.6	29.9	0.06	0.37	—	0.37	0.34	—	0.34	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.11	17.6	29.9	0.06	0.37	—	0.37	0.34	—	0.34	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.2

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.51	12.6	21.4	0.04	0.26	—	0.26	0.24	—	0.24	4,476
Architectural Coatings	13.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.22
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	2.29	3.90	0.01	0.05	—	0.05	0.04	—	0.04	741
Architectural Coatings	2.52	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.20. Architectural Coating (2039) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	6.32	26.8	0.04	0.11	—	0.11	0.11	—	0.11	4,476
Architectural Coatings	13.8	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.03	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	7.22
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	1.15	4.89	0.01	0.02	—	0.02	0.02	—	0.02	741
Architectural Coatings	2.52	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.20
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.21. Architectural Coating (2040) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.10	17.4	29.9	0.06	0.36	—	0.36	0.33	—	0.33	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.01	3.45	0.01	0.04	—	0.04	0.04	—	0.04	723
Architectural Coatings	2.23	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.37	0.63	< 0.005	0.01	—	0.01	0.01	—	0.01	120
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.22. Architectural Coating (2040) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	8.85	37.5	0.06	0.16	—	0.16	0.16	—	0.16	6,266
Architectural Coatings	19.3	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.04	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	10.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	1.02	4.33	0.01	0.02	—	0.02	0.02	—	0.02	723
Architectural Coatings	2.23	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.15
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.79	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	120
Architectural Coatings	0.41	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2038	5/31/2038	5.00	107	—
Grading	Grading	1/1/2038	12/31/2038	5.00	261	—
Foundation	Building Construction	6/1/2038	2/28/2039	5.00	195	—
Building Exterior	Building Construction	8/1/2038	10/31/2039	5.00	326	—
Paving	Paving	8/1/2039	2/28/2040	5.00	152	—
Architectural Coating	Architectural Coating	10/1/2038	2/28/2040	5.00	368	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	2.00	8.00	367	0.29
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	2.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74

Building Exterior	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Average	2.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Average	2.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	4.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	3.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37

Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	3.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	2.00	8.00	46.0	0.45
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	2.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Foundation	Pumps	Diesel	Average	6.00	8.00	11.0	0.74
Foundation	Cranes	Electric	Average	1.00	8.00	367	0.29
Foundation	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	4.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Exterior	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	6.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	6.00	8.00	46.0	0.31

Architectural Coating	Forklifts	Diesel	Tier 4 Final	4.00	8.00	82.0	0.20
Architectural Coating	Cranes	Electric	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	3.00	8.00	367	0.29
Architectural Coating	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	4.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	5.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	350	0.50	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	10.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2

Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.50	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	20.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	5.00	0.50	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	350	0.50	HHDT
Foundation	—	—	—	—

Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	10.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.50	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	20.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	1,114,014	362,098	55,442

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	215,973	—
Grading	55,000	567,650	119	0.00	—
Paving	0.00	0.00	0.00	0.00	21.2

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Industrial Park	0.00	0%
Strip Mall	0.00	0%
Enclosed Parking with Elevator	21.2	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2038	4,830	690	0.05	0.01
2039	4,830	690	0.05	0.01
2040	1,780	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
Land Use	see assumptions

Radford - Construction Phase 4 (Onsite) 2045 - Mitigated Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 4 (Onsite) 2045 - Mitigated
Construction Start Date	9/1/2043
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	125	1000sqft	2.86	124,794	10,000	—	—	—

Industrial Park	69.1	1000sqft	1.59	69,120	10,000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.36	18.4	31.8	0.06	0.33	2.82	3.15	0.30	0.29	0.59	5,782
Mit.	6.83	12.2	36.3	0.06	0.23	2.82	3.05	0.22	0.29	0.51	5,782
% Reduced	7%	34%	-14%	—	31%	—	3%	29%	—	15%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.36	8.57	14.7	0.03	0.16	1.23	1.28	0.15	0.18	0.23	2,893
Mit.	6.83	4.52	17.7	0.03	0.10	1.23	1.26	0.09	0.18	0.21	2,893
% Reduced	7%	47%	-20%	—	40%	—	2%	38%	—	9%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.24	5.24	9.34	0.02	0.10	0.59	0.69	0.09	0.07	0.16	1,735
Mit.	3.11	3.08	10.9	0.02	0.06	0.59	0.66	0.06	0.07	0.13	1,735
% Reduced	4%	41%	-16%	—	36%	—	5%	33%	—	19%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.59	0.96	1.70	< 0.005	0.02	0.11	0.13	0.02	0.01	0.03	287

Mit.	0.57	0.56	1.98	< 0.005	0.01	0.11	0.12	0.01	0.01	0.02	287
% Reduced	4%	41%	-16%	—	36%	—	5%	33%	—	19%	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	7.36	18.4	31.8	0.06	0.33	2.82	3.15	0.30	0.29	0.59	5,782
2045	7.00	6.94	11.3	0.02	0.08	0.19	0.27	0.07	0.02	0.09	1,761
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	7.36	8.57	14.7	0.03	0.16	1.23	1.28	0.15	0.18	0.23	2,893
2045	7.35	8.49	14.6	0.03	0.16	0.45	0.60	0.14	0.05	0.19	2,893
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2044	2.50	5.24	9.34	0.02	0.10	0.59	0.69	0.09	0.07	0.16	1,735
2045	3.24	2.42	4.03	0.01	0.03	0.08	0.11	0.03	0.01	0.04	655
Annual	—	—	—	—	—	—	—	—	—	—	—
2044	0.46	0.96	1.70	< 0.005	0.02	0.11	0.13	0.02	0.01	0.03	287
2045	0.59	0.44	0.73	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	108

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	6.83	12.2	36.3	0.06	0.23	2.82	3.05	0.22	0.29	0.51	5,782
2045	6.67	6.71	12.2	0.02	0.04	0.19	0.24	0.04	0.02	0.06	1,761

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2044	6.83	4.52	17.7	0.03	0.10	1.23	1.26	0.09	0.18	0.21	2,893
2045	6.83	4.51	17.7	0.03	0.10	0.45	0.54	0.09	0.05	0.14	2,893
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2044	2.21	3.08	10.9	0.02	0.06	0.59	0.66	0.06	0.07	0.13	1,735
2045	3.11	2.04	4.39	0.01	0.02	0.08	0.10	0.02	0.01	0.03	655
Annual	—	—	—	—	—	—	—	—	—	—	—
2044	0.40	0.56	1.98	< 0.005	0.01	0.11	0.12	0.01	0.01	0.02	287
2045	0.57	0.37	0.80	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	108

3. Construction Emissions Details

3.1. Demolition (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.13	8.72	0.01	0.05	—	0.05	0.04	—	0.04	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	8.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.13	8.72	0.01	0.05	—	0.05	0.04	—	0.04	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	8.30

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.38	1.05	< 0.005	0.01	—	0.01	0.01	—	0.01	163
Demolition	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.99
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.0
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.2. Demolition (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.44	9.48	0.01	0.03	—	0.03	0.03	—	0.03	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	8.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.44	9.48	0.01	0.03	—	0.03	0.03	—	0.03	1,352
Demolition	—	—	—	—	—	1.20	1.20	—	0.18	0.18	—
Onsite truck	< 0.005	0.05	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.17	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Demolition	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.99
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.0
Demolition	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.3. Grading (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	5.81	15.0	0.02	0.13	—	0.13	0.12	—	0.12	2,370
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.23	4.23	3.82	0.01	< 0.005	2.38	2.38	< 0.005	0.24	0.25	689

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.70	1.80	< 0.005	0.02	—	0.02	0.01	—	0.01	286
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.53	0.47	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	83.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.13	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	47.3
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	13.9
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.20	16.3	0.02	0.09	—	0.09	0.08	—	0.08	2,370
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.23	4.23	3.82	0.01	< 0.005	2.38	2.38	< 0.005	0.24	0.25	689
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.39	1.97	< 0.005	0.01	—	0.01	0.01	—	0.01	286
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.03	0.53	0.47	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	83.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	47.3
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	0.10	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	13.9
Offsite	—	—	—	—	—	—	—	—	—	—	—

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

3.5. Foundation (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.21	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	9.48
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.22	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	29.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.70
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.83
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.28
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Foundation (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.21	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	0.04	0.03	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	9.48
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	29.2
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.70
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.83
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.28
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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 Exterior (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	6.82	12.0	0.02	0.15	—	0.15	0.14	—	0.14	2,490
Onsite truck	0.01	0.25	0.21	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	58.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	6.82	12.0	0.02	0.15	—	0.15	0.14	—	0.14	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	59.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	2.86	5.00	0.01	0.06	—	0.06	0.06	—	0.06	1,043
Onsite truck	0.01	0.11	0.09	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	24.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.52	0.91	< 0.005	0.01	—	0.01	0.01	—	0.01	173
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	4.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.8. Building Exterior (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.01	0.25	0.21	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	58.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	59.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	1.36	6.32	0.01	0.04	—	0.04	0.04	—	0.04	1,043
Onsite truck	0.01	0.11	0.09	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	24.7
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.25	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	173
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	4.10
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.9. Building Exterior (2045) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	6.75	11.9	0.02	0.14	—	0.14	0.13	—	0.13	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	59.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.41	0.72	< 0.005	0.01	—	0.01	0.01	—	0.01	151
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.55
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.59
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.10. Building Exterior (2045) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.26	15.1	0.02	0.09	—	0.09	0.09	—	0.09	2,490
Onsite truck	0.01	0.27	0.22	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	59.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.20	0.92	< 0.005	0.01	—	0.01	0.01	—	0.01	151
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.55
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.0
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.59
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.11. Paving (2045) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	5.39	8.75	0.01	0.07	—	0.07	0.06	—	0.06	1,399
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	18.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.28	2.09	< 0.005	0.02	—	0.02	0.02	—	0.02	333
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	4.50
Annual	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.23	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	55.2
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.75
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2045) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.65	9.70	0.01	0.04	—	0.04	0.04	—	0.04	1,399

Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.08	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	18.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.35	2.31	< 0.005	0.01	—	0.01	0.01	—	0.01	333
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	4.50
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.25	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	55.2
Paving	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.75
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2044) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.43	0.74	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	99.3
Architectural Coatings	1.91	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.42
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.14. Architectural Coating (2044) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332

Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.28	0.70	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	99.3
Architectural Coatings	1.91	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	3.42
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Architectural Coatings	0.35	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.57
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.15. Architectural Coating (2045) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.42	2.48	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.4

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.67	1.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	156
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	5.35
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.9
Architectural Coatings	0.55	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

3.16. Architectural Coating (2045) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.94	2.35	< 0.005	0.01	—	0.01	0.01	—	0.01	332
Architectural Coatings	6.38	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	11.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.44	1.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	156
Architectural Coatings	3.01	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	5.35
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.9
Architectural Coatings	0.55	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

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

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	3/1/2044	4/30/2044	5.00	44.0	—
Grading	Grading	5/1/2044	6/30/2044	5.00	44.0	—
Foundation	Building Construction	5/1/2044	7/30/2044	5.00	65.0	—

Building Exterior	Building Construction	6/1/2044	1/31/2045	5.00	175	—
Paving	Paving	5/1/2045	8/29/2045	5.00	87.0	—
Architectural Coating	Architectural Coating	8/1/2044	8/29/2045	5.00	282	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	1.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Grading	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74

Building Exterior	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	1.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	1.00	8.00	158	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	158	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36
Grading	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45

Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Tier 4 Final	2.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Tier 4 Final	2.00	8.00	40.0	0.50
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	1.00	8.00	46.0	0.31
Architectural Coating	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT

Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	6.00	0.50	HHDT,MHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	0.00	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	0.00	34.0	HHDT
Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	0.00	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	0.00	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Foundation	—	—	—	—
Foundation	Worker	0.00	18.5	LDA,LDT1,LDT2
Foundation	Vendor	0.00	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Paving	Vendor	0.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	10.0	0.50	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	6.00	0.50	HHDT,MHDT

Building Exterior	—	—	—	—
Building Exterior	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	0.00	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	290,871	96,957	—

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	83,219	—
Grading	0.00	22,500	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.50

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.50	0%
Industrial Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2044	255	690	0.05	0.01
2045	255	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
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Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions

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5.18.1.2. Mitigated

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Offsite Construction
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Bridge/Overpass Construction	0.10	Mile	1.00	0.00	0.00	—	—	—

User Defined Linear	1.50	Mile	7.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.07	1.68	14.4	21.1	0.05	0.50	0.79	1.29	0.46	0.21	0.67	6,201
Mit.	1.32	1.12	8.38	25.8	0.05	0.30	0.79	1.08	0.28	0.21	0.43	6,201
% Reduced	36%	34%	42%	-22%	—	40%	—	16%	40%	—	36%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.07	1.68	14.5	21.0	0.05	0.50	0.79	1.29	0.46	0.21	0.67	6,183
Mit.	1.32	1.12	8.43	25.6	0.05	0.30	0.79	1.08	0.28	0.21	0.43	6,183
% Reduced	36%	34%	42%	-22%	—	40%	—	16%	40%	—	36%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.20	1.75	2.53	0.01	0.06	0.09	0.15	0.06	0.02	0.08	746
Mit.	0.13	0.11	0.85	3.09	0.01	0.03	0.09	0.11	0.03	0.02	0.04	746
% Reduced	47%	45%	51%	-22%	—	49%	—	26%	49%	—	46%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.05	0.04	0.32	0.46	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	124
Mit.	0.02	0.02	0.16	0.56	< 0.005	0.01	0.02	0.02	0.01	< 0.005	0.01	124
% Reduced	47%	45%	51%	-22%	—	49%	—	26%	49%	—	46%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.91	1.59	12.3	19.8	0.03	0.50	0.79	1.29	0.46	0.15	0.61	3,671
2028	2.07	1.68	14.4	21.1	0.05	0.50	0.79	1.29	0.46	0.21	0.67	6,201
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.91	1.59	12.4	19.5	0.03	0.50	0.79	1.29	0.46	0.15	0.61	3,652
2028	2.07	1.68	14.5	21.0	0.05	0.50	0.79	1.29	0.46	0.21	0.67	6,183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.17	0.14	1.10	1.69	< 0.005	0.04	0.07	0.11	0.04	0.01	0.05	319
2028	0.25	0.20	1.75	2.53	0.01	0.06	0.09	0.15	0.06	0.02	0.08	746
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.03	0.03	0.20	0.31	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	52.7
2028	0.05	0.04	0.32	0.46	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	124

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

2027	1.32	1.12	8.38	20.6	0.03	0.30	0.79	1.08	0.28	0.15	0.43	3,671
2028	0.92	0.76	6.18	25.8	0.05	0.16	0.79	0.95	0.15	0.21	0.36	6,201
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.32	1.12	8.43	20.3	0.03	0.30	0.79	1.08	0.28	0.15	0.43	3,652
2028	0.91	0.76	6.28	25.6	0.05	0.16	0.79	0.95	0.15	0.21	0.36	6,183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.13	0.11	0.85	1.75	< 0.005	0.03	0.07	0.10	0.03	0.01	0.04	319
2028	0.11	0.09	0.76	3.09	0.01	0.02	0.09	0.11	0.02	0.02	0.04	746
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.02	0.02	0.16	0.32	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	52.7
2028	0.02	0.02	0.14	0.56	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	124

3. Construction Emissions Details

3.1. Undergrounding (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.92	0.77	5.83	10.1	0.01	0.27	—	0.27	0.25	—	0.25	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.92	0.77	5.83	10.1	0.01	0.27	—	0.27	0.25	—	0.25	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.37	0.64	< 0.005	0.02	—	0.02	0.02	—	0.02	99.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	135
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	192
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	70.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	127
Vendor	0.01	0.01	0.21	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	191
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	70.0

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	8.16
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.1
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.35
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.73

3.2. Undergrounding (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.29	1.88	10.9	0.01	0.07	—	0.07	0.07	—	0.07	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.29	1.88	10.9	0.01	0.07	—	0.07	0.07	—	0.07	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	99.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	135
Vendor	0.01	0.01	0.20	0.09	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	192
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	70.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	127
Vendor	0.01	0.01	0.21	0.10	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	191
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	70.0
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	8.16
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	12.1
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	4.41
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.35
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.73

3.3. Bridge Construction (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.4	19.1	0.04	0.48	—	0.48	0.44	—	0.44	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.4	19.1	0.04	0.48	—	0.48	0.44	—	0.44	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.50	2.30	< 0.005	0.06	—	0.06	0.05	—	0.05	482
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	79.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.13	0.00	0.00	0.26	0.26	0.00	0.06	0.06	265
Vendor	0.12	0.04	1.88	0.91	0.01	0.01	0.51	0.53	0.01	0.14	0.16	1,873
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	68.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.96	0.00	0.00	0.26	0.26	0.00	0.06	0.06	250
Vendor	0.12	0.04	1.97	0.92	0.01	0.01	0.51	0.53	0.01	0.14	0.16	1,870
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	68.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	30.7
Vendor	0.01	< 0.005	0.24	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	226
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	8.25
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.08
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.3
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.37

3.4. Bridge Construction (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.65	4.15	23.7	0.04	0.15	—	0.15	0.14	—	0.14	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.65	4.15	23.7	0.04	0.15	—	0.15	0.14	—	0.14	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.50	2.86	< 0.005	0.02	—	0.02	0.02	—	0.02	482
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.09	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	79.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.13	0.00	0.00	0.26	0.26	0.00	0.06	0.06	265
Vendor	0.12	0.04	1.88	0.91	0.01	0.01	0.51	0.53	0.01	0.14	0.16	1,873
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	68.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.96	0.00	0.00	0.26	0.26	0.00	0.06	0.06	250
Vendor	0.12	0.04	1.97	0.92	0.01	0.01	0.51	0.53	0.01	0.14	0.16	1,870
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	68.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	30.7
Vendor	0.01	< 0.005	0.24	0.11	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	226
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	8.25
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	5.08
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	37.3
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.37

3.5. Radford and Carpenters (2027) - Unmitigated

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

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

Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	12.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	12.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.66	0.90	< 0.005	0.03	—	0.03	0.02	—	0.02	134
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.40
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.23
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.90	0.00	0.00	0.20	0.20	0.00	0.05	0.05	202
Vendor	0.02	0.01	0.33	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	319
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.76	0.00	0.00	0.20	0.20	0.00	0.05	0.05	191
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	319
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	22.3

Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	36.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.70
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.08
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

3.6. Radford and Carpenters (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
Onsite truck	0.01	< 0.005	0.07	0.05	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	12.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
Onsite truck	0.01	< 0.005	0.08	0.06	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	12.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.66	0.90	< 0.005	0.03	—	0.03	0.02	—	0.02	134
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	1.40
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.23

Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.90	0.00	0.00	0.20	0.20	0.00	0.05	0.05	202
Vendor	0.02	0.01	0.33	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	319
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.76	0.00	0.00	0.20	0.20	0.00	0.05	0.05	191
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	319
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	0.01	0.01	22.3
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	36.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.70
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.08
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	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
Undergrounding	Linear, Drainage, Utilities, & Sub-Grade	1/1/2027	12/31/2027	5.00	23.0	—
Bridge Construction	Linear, Drainage, Utilities, & Sub-Grade	1/1/2028	11/30/2028	5.00	44.0	—
Radford and Carpenters	Linear, Paving	8/1/2027	12/31/2027	5.00	42.0	—

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
Undergrounding	Graders	Diesel	Average	1.00	8.00	148	0.41
Undergrounding	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Undergrounding	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Undergrounding	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Bridge Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Bridge Construction	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Bridge Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Bridge Construction	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Radford and Carpenters	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Radford and Carpenters	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Undergrounding	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Undergrounding	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36

Undergrounding	Tractors/Loaders/Backh	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Undergrounding	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Bridge Construction	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Bridge Construction	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	150	0.36
Bridge Construction	Tractors/Loaders/Backh oes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Bridge Construction	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Radford and Carpenters	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Radford and Carpenters	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Undergrounding	—	—	—	—
Undergrounding	Worker	10.0	18.5	LDA,LDT1,LDT2
Undergrounding	Vendor	6.00	10.2	HHDT,MHDT
Undergrounding	Hauling	1.00	20.0	HHDT
Undergrounding	Onsite truck	—	—	HHDT
Bridge Construction	—	—	—	—
Bridge Construction	Worker	20.0	18.5	LDA,LDT1,LDT2
Bridge Construction	Vendor	60.0	10.2	HHDT,MHDT
Bridge Construction	Hauling	1.00	20.0	HHDT
Bridge Construction	Onsite truck	—	—	HHDT
Radford and Carpenters	—	—	—	—
Radford and Carpenters	Worker	15.0	18.5	LDA,LDT1,LDT2
Radford and Carpenters	Vendor	10.0	10.2	HHDT,MHDT
Radford and Carpenters	Hauling	0.00	20.0	HHDT

Radford and Carpenters	Onsite truck	5.00	0.20	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Undergrounding	—	—	—	—
Undergrounding	Worker	10.0	18.5	LDA,LDT1,LDT2
Undergrounding	Vendor	6.00	10.2	HHDT,MHDT
Undergrounding	Hauling	1.00	20.0	HHDT
Undergrounding	Onsite truck	—	—	HHDT
Bridge Construction	—	—	—	—
Bridge Construction	Worker	20.0	18.5	LDA,LDT1,LDT2
Bridge Construction	Vendor	60.0	10.2	HHDT,MHDT
Bridge Construction	Hauling	1.00	20.0	HHDT
Bridge Construction	Onsite truck	—	—	HHDT
Radford and Carpenters	—	—	—	—
Radford and Carpenters	Worker	15.0	18.5	LDA,LDT1,LDT2
Radford and Carpenters	Vendor	10.0	10.2	HHDT,MHDT
Radford and Carpenters	Hauling	0.00	20.0	HHDT
Radford and Carpenters	Onsite truck	5.00	0.20	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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)

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)
Undergrounding	—	100	8.00	0.00	—
Bridge Construction	—	100	8.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
—	0.00	0%
—	0.00	0%
—	0.00	0%
—	34.9	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2027	0.00	690	0.05	0.01
2028	0.00	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions

Radford - Offsite Construction (Onsite) Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Offsite Construction (Onsite)
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Bridge/Overpass Construction	0.10	Mile	1.00	0.00	0.00	—	—	—

User Defined Linear	1.50	Mile	7.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.87	1.57	12.4	19.1	0.04	0.49	0.14	0.63	0.45	0.01	0.47	3,995
Mit.	1.18	1.01	7.61	23.7	0.04	0.29	0.14	0.43	0.27	0.01	0.29	3,995
% Reduced	37%	36%	39%	-24%	—	41%	—	32%	40%	—	39%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.87	1.57	12.4	19.1	0.04	0.49	0.14	0.63	0.45	0.01	0.47	3,995
Mit.	1.18	1.01	7.61	23.7	0.04	0.29	0.14	0.43	0.27	0.01	0.29	3,995
% Reduced	37%	36%	39%	-24%	—	41%	—	32%	40%	—	39%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.19	1.50	2.30	< 0.005	0.06	0.01	0.06	0.05	< 0.005	0.05	482
Mit.	0.12	0.10	0.78	2.86	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	482
% Reduced	47%	47%	48%	-24%	—	48%	—	33%	48%	—	46%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.04	0.03	0.27	0.42	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	79.7
Mit.	0.02	0.02	0.14	0.52	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	79.7
% Reduced	47%	47%	48%	-24%	—	48%	—	33%	48%	—	46%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.77	1.49	11.6	17.9	0.03	0.49	0.14	0.63	0.45	0.01	0.47	2,741
2028	1.87	1.57	12.4	19.1	0.04	0.48	< 0.005	0.48	0.44	< 0.005	0.44	3,995
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.77	1.49	11.6	17.9	0.03	0.49	0.14	0.63	0.45	0.01	0.47	2,741
2028	1.87	1.57	12.4	19.1	0.04	0.48	< 0.005	0.48	0.44	< 0.005	0.44	3,995
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.16	0.13	1.03	1.54	< 0.005	0.04	0.01	0.05	0.04	< 0.005	0.04	233
2028	0.23	0.19	1.50	2.30	< 0.005	0.06	< 0.005	0.06	0.05	< 0.005	0.05	482
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.03	0.02	0.19	0.28	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	38.7
2028	0.04	0.03	0.27	0.42	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	79.7

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

2027	1.18	1.01	7.61	18.7	0.03	0.29	0.14	0.43	0.27	0.01	0.29	2,741
2028	0.71	0.65	4.15	23.7	0.04	0.15	< 0.005	0.15	0.14	< 0.005	0.14	3,995
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.18	1.01	7.61	18.7	0.03	0.29	0.14	0.43	0.27	0.01	0.29	2,741
2028	0.71	0.65	4.15	23.7	0.04	0.15	< 0.005	0.15	0.14	< 0.005	0.14	3,995
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.12	0.10	0.78	1.59	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	233
2028	0.09	0.08	0.50	2.86	< 0.005	0.02	< 0.005	0.02	0.02	< 0.005	0.02	482
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.02	0.02	0.14	0.29	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	38.7
2028	0.02	0.01	0.09	0.52	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	79.7

3. Construction Emissions Details

3.1. Undergrounding (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.92	0.77	5.83	10.1	0.01	0.27	—	0.27	0.25	—	0.25	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.92	0.77	5.83	10.1	0.01	0.27	—	0.27	0.25	—	0.25	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.37	0.64	< 0.005	0.02	—	0.02	0.02	—	0.02	99.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.2. Undergrounding (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.29	1.88	10.9	0.01	0.07	—	0.07	0.07	—	0.07	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.29	1.88	10.9	0.01	0.07	—	0.07	0.07	—	0.07	1,573
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.01	0.01	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	99.1
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	16.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.3. Bridge Construction (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.4	19.1	0.04	0.48	—	0.48	0.44	—	0.44	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	12.4	19.1	0.04	0.48	—	0.48	0.44	—	0.44	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.50	2.30	< 0.005	0.06	—	0.06	0.05	—	0.05	482
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	79.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.4. Bridge Construction (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.65	4.15	23.7	0.04	0.15	—	0.15	0.14	—	0.14	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.65	4.15	23.7	0.04	0.15	—	0.15	0.14	—	0.14	3,995
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.50	2.86	< 0.005	0.02	—	0.02	0.02	—	0.02	482
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.09	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	79.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—

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

3.5. Radford and Carpenters (2027) - Unmitigated

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

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

Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.66	0.90	< 0.005	0.03	—	0.03	0.02	—	0.02	134
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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

3.6. Radford and Carpenters (2027) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.72	5.73	7.81	0.01	0.23	—	0.23	0.21	—	0.21	1,167
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.66	0.90	< 0.005	0.03	—	0.03	0.02	—	0.02	134
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	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
Undergrounding	Linear, Drainage, Utilities, & Sub-Grade	1/1/2027	12/31/2027	5.00	23.0	—
Bridge Construction	Linear, Drainage, Utilities, & Sub-Grade	1/1/2028	11/30/2028	5.00	44.0	—
Radford and Carpenters	Linear, Paving	8/1/2027	12/31/2027	5.00	42.0	—

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
Undergrounding	Graders	Diesel	Average	1.00	8.00	148	0.41
Undergrounding	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Undergrounding	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Undergrounding	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Bridge Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Bridge Construction	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
Bridge Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Bridge Construction	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Radford and Carpenters	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Radford and Carpenters	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Undergrounding	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Undergrounding	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36

Undergrounding	Tractors/Loaders/Backh	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Undergrounding	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Bridge Construction	Cranes	Diesel	Tier 4 Final	2.00	8.00	367	0.29
Bridge Construction	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	150	0.36
Bridge Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Bridge Construction	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Radford and Carpenters	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Radford and Carpenters	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Undergrounding	—	—	—	—
Undergrounding	Worker	0.00	18.5	LDA,LDT1,LDT2
Undergrounding	Vendor	0.00	10.2	HHDT,MHDT
Undergrounding	Hauling	0.00	20.0	HHDT
Undergrounding	Onsite truck	—	—	HHDT
Bridge Construction	—	—	—	—
Bridge Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Bridge Construction	Vendor	0.00	10.2	HHDT,MHDT
Bridge Construction	Hauling	0.00	20.0	HHDT
Bridge Construction	Onsite truck	—	—	HHDT
Radford and Carpenters	—	—	—	—
Radford and Carpenters	Worker	0.00	18.5	LDA,LDT1,LDT2
Radford and Carpenters	Vendor	0.00	10.2	HHDT,MHDT
Radford and Carpenters	Hauling	0.00	20.0	HHDT

Radford and Carpenters	Onsite truck	0.00	0.20	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Undergrounding	—	—	—	—
Undergrounding	Worker	0.00	18.5	LDA,LDT1,LDT2
Undergrounding	Vendor	0.00	10.2	HHDT,MHDT
Undergrounding	Hauling	0.00	20.0	HHDT
Undergrounding	Onsite truck	—	—	HHDT
Bridge Construction	—	—	—	—
Bridge Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Bridge Construction	Vendor	0.00	10.2	HHDT,MHDT
Bridge Construction	Hauling	0.00	20.0	HHDT
Bridge Construction	Onsite truck	—	—	HHDT
Radford and Carpenters	—	—	—	—
Radford and Carpenters	Worker	0.00	18.5	LDA,LDT1,LDT2
Radford and Carpenters	Vendor	0.00	10.2	HHDT,MHDT
Radford and Carpenters	Hauling	0.00	20.0	HHDT
Radford and Carpenters	Onsite truck	0.00	0.20	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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)

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)
Undergrounding	—	100	8.00	0.00	—
Bridge Construction	—	100	8.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
—	0.00	0%
—	0.00	0%
—	0.00	0%
—	34.9	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2027	0.00	690	0.05	0.01
2028	0.00	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
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Radford - Construction Phase 4 Only (Unmitigated) Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 4 Only (Unmitigated)
Construction Start Date	9/1/2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	125	1000sqft	2.86	124,790	10,000	—	—	—

Industrial Park	69.1	1000sqft	1.59	69,120	10,000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.63	10.3	20.2	56.0	0.06	0.52	9.87	10.4	0.48	2.19	2.68	14,784
Mit.	3.28	9.21	10.3	60.5	0.06	0.16	9.87	10.0	0.15	2.19	2.34	14,784
% Reduced	29%	10%	49%	-8%	—	70%	—	4%	68%	—	12%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.9	13.7	123	114	0.63	2.13	44.5	46.6	2.04	9.61	11.6	96,826
Mit.	9.28	11.6	104	122	0.63	1.35	44.5	45.8	1.33	9.61	10.9	96,826
% Reduced	22%	15%	15%	-7%	—	37%	—	2%	35%	—	6%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.51	6.71	28.6	37.3	0.13	0.55	10.5	11.1	0.52	2.31	2.83	21,596
Mit.	2.59	5.98	22.0	40.1	0.13	0.29	10.5	10.8	0.29	2.31	2.59	21,596
% Reduced	26%	11%	23%	-8%	—	47%	—	2%	45%	—	8%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.64	1.22	5.22	6.80	0.02	0.10	1.92	2.02	0.09	0.42	0.52	3,575
Mit.	0.47	1.09	4.02	7.33	0.02	0.05	1.92	1.97	0.05	0.42	0.47	3,575
% Reduced	26%	11%	23%	-8%	—	47%	—	2%	45%	—	8%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.74	0.58	5.44	8.52	0.02	0.15	1.98	2.13	0.14	0.35	0.50	2,242
2029	4.63	10.3	20.2	56.0	0.06	0.52	9.87	10.4	0.48	2.19	2.68	14,784
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	10.6	5.92	119	98.1	0.61	1.98	41.5	43.5	1.91	8.92	10.8	94,001
2029	11.9	13.7	123	114	0.63	2.13	44.5	46.6	2.04	9.61	11.6	96,826
2030	2.46	8.53	14.2	28.1	0.04	0.37	3.49	3.86	0.34	0.81	1.14	7,008
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.15	0.61	14.2	10.4	0.07	0.23	4.56	4.79	0.22	0.98	1.20	10,824
2029	3.51	6.71	28.6	37.3	0.13	0.55	10.5	11.1	0.52	2.31	2.83	21,596
2030	0.24	0.95	1.33	2.83	< 0.005	0.03	0.37	0.40	0.03	0.09	0.12	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.21	0.11	2.59	1.90	0.01	0.04	0.83	0.87	0.04	0.18	0.22	1,792
2029	0.64	1.22	5.22	6.80	0.02	0.10	1.92	2.02	0.09	0.42	0.52	3,575
2030	0.04	0.17	0.24	0.52	< 0.005	0.01	0.07	0.07	0.01	0.02	0.02	117

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.28	0.22	2.94	8.53	0.02	0.03	1.98	2.01	0.03	0.35	0.38	2,242
2029	3.28	9.21	10.3	60.5	0.06	0.16	9.87	10.0	0.15	2.19	2.34	14,784
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	8.47	4.20	103	104	0.61	1.28	41.5	42.8	1.27	8.92	10.2	94,001
2029	9.28	11.6	104	122	0.63	1.35	44.5	45.8	1.33	9.61	10.9	96,826
2030	1.92	8.11	10.4	30.1	0.04	0.23	3.49	3.73	0.22	0.81	1.02	7,008
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.89	0.40	12.3	10.9	0.07	0.15	4.56	4.71	0.15	0.98	1.12	10,824
2029	2.59	5.98	22.0	40.1	0.13	0.29	10.5	10.8	0.29	2.31	2.59	21,596
2030	0.18	0.90	0.90	3.07	< 0.005	0.02	0.37	0.39	0.02	0.09	0.10	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.16	0.07	2.25	1.99	0.01	0.03	0.83	0.86	0.03	0.18	0.21	1,792
2029	0.47	1.09	4.02	7.33	0.02	0.05	1.92	1.97	0.05	0.42	0.47	3,575
2030	0.03	0.16	0.16	0.56	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	117

3. Construction Emissions Details

3.1. Demolition (2028) - Unmitigated

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

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

Off-Road Equipment	0.57	0.47	4.32	6.54	0.01	0.14	—	0.14	0.13	—	0.13	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	9.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.47	4.32	6.54	0.01	0.14	—	0.14	0.13	—	0.13	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	9.67
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.77	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Demolition	—	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	18.2
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.58	0.00	0.00	0.37	0.37	0.00	0.09	0.09	371
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
Hauling	0.05	0.01	0.97	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.34	0.00	0.00	0.37	0.37	0.00	0.09	0.09	351

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
Hauling	0.05	0.01	1.00	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	920
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	42.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.95
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
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.0

3.2. Demolition (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.83	6.55	0.01	0.02	—	0.02	0.02	—	0.02	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	9.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.83	6.55	0.01	0.02	—	0.02	0.02	—	0.02	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	9.67
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.22	0.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	110
Demolition	—	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	18.2
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.58	0.00	0.00	0.37	0.37	0.00	0.09	0.09	371
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
Hauling	0.05	0.01	0.97	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.34	0.00	0.00	0.37	0.37	0.00	0.09	0.09	351
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
Hauling	0.05	0.01	1.00	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	920
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	42.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.95
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
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.0

3.3. Grading (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.79	15.2	23.1	0.04	0.59	—	0.59	0.55	—	0.55	4,027
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	5.04	3.77	0.01	< 0.005	11.2	11.2	< 0.005	1.13	1.13	818
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	1.82	2.76	< 0.005	0.07	—	0.07	0.07	—	0.07	481
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.05	0.02	0.59	0.44	< 0.005	< 0.005	1.25	1.25	< 0.005	0.13	0.13	96.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.33	0.50	< 0.005	0.01	—	0.01	0.01	—	0.01	79.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	16.0
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.44	0.00	0.00	0.39	0.39	0.00	0.09	0.09	376
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
Hauling	4.39	0.87	84.1	30.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	77,308
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	45.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.53	0.11	10.2	3.57	0.06	0.12	2.50	2.62	0.12	0.68	0.81	9,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.54
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
Hauling	0.10	0.02	1.86	0.65	0.01	0.02	0.46	0.48	0.02	0.12	0.15	1,529

3.4. Grading (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.72	5.40	26.2	0.04	0.14	—	0.14	0.13	—	0.13	4,027

Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	5.04	3.77	0.01	< 0.005	11.2	11.2	< 0.005	1.13	1.13	818
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.64	3.13	< 0.005	0.02	—	0.02	0.02	—	0.02	481
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.05	0.02	0.59	0.44	< 0.005	< 0.005	1.25	1.25	< 0.005	0.13	0.13	96.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	79.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	16.0
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.44	0.00	0.00	0.39	0.39	0.00	0.09	0.09	376
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
Hauling	4.39	0.87	84.1	30.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	77,308
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	45.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.53	0.11	10.2	3.57	0.06	0.12	2.50	2.62	0.12	0.68	0.81	9,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.54
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
Hauling	0.10	0.02	1.86	0.65	0.01	0.02	0.46	0.48	0.02	0.12	0.15	1,529

3.5. Grading (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.73	14.5	23.1	0.04	0.54	—	0.54	0.50	—	0.50	4,026
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	4.98	3.77	0.01	< 0.005	11.2	11.2	< 0.005	1.13	1.13	805
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.56	4.07	0.01	0.10	—	0.10	0.09	—	0.09	709
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	0.08	0.04	0.85	0.65	< 0.005	< 0.005	1.85	1.85	< 0.005	0.19	0.19	141
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.47	0.74	< 0.005	0.02	—	0.02	0.02	—	0.02	117
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—

Onsite truck	0.01	0.01	0.16	0.12	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.03	23.3
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.10	1.34	0.00	0.00	0.39	0.39	0.00	0.09	0.09	369
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
Hauling	4.37	0.87	81.0	29.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	75,398
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.78	0.16	14.5	5.18	0.09	0.18	3.69	3.86	0.18	1.01	1.19	13,287
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.9
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
Hauling	0.14	0.03	2.64	0.95	0.02	0.03	0.67	0.71	0.03	0.18	0.22	2,200

3.6. Grading (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.71	5.36	26.2	0.04	0.13	—	0.13	0.12	—	0.12	4,026

Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	4.98	3.77	0.01	< 0.005	11.2	11.2	< 0.005	1.13	1.13	805
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	0.94	4.62	0.01	0.02	—	0.02	0.02	—	0.02	709
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	0.08	0.04	0.85	0.65	< 0.005	< 0.005	1.85	1.85	< 0.005	0.19	0.19	141
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.84	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	117
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.01	0.16	0.12	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.03	23.3
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.10	1.34	0.00	0.00	0.39	0.39	0.00	0.09	0.09	369
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
Hauling	4.37	0.87	81.0	29.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	75,398
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.78	0.16	14.5	5.18	0.09	0.18	3.69	3.86	0.18	1.01	1.19	13,287
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.9
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
Hauling	0.14	0.03	2.64	0.95	0.02	0.03	0.67	0.71	0.03	0.18	0.22	2,200

3.7. Building Exterior (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.94	12.3	0.02	0.32	—	0.32	0.29	—	0.29	2,409
Onsite truck	0.03	0.01	0.33	0.25	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	79.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.75	< 0.005	0.02	—	0.02	0.02	—	0.02	146
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	4.82
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.80
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Worker	1.59	1.39	1.59	19.7	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,133
Vendor	0.12	0.04	2.03	0.95	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,932
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.25	0.00	0.00	0.32	0.32	0.00	0.07	0.07	316
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	117
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	52.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	19.4
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

3.8. Building Exterior (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.31	2.66	14.7	0.02	0.07	—	0.07	0.07	—	0.07	2,409
Onsite truck	0.03	0.01	0.33	0.25	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	79.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.89	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	146
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	4.82
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.03	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.80
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.59	1.39	1.59	19.7	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,133
Vendor	0.12	0.04	2.03	0.95	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,932
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.25	0.00	0.00	0.32	0.32	0.00	0.07	0.07	316
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	117
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	52.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	19.4
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

3.9. Building Exterior (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.93	8.60	12.3	0.02	0.29	—	0.29	0.27	—	0.27	2,408

Onsite truck	0.03	0.01	0.31	0.23	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	77.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.93	8.60	12.3	0.02	0.29	—	0.29	0.27	—	0.27	2,408
Onsite truck	0.03	0.01	0.33	0.24	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	78.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.39	3.55	5.07	0.01	0.12	—	0.12	0.11	—	0.11	994
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	32.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.93	< 0.005	0.02	—	0.02	0.02	—	0.02	165
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	5.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.54	1.35	1.22	21.6	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,333
Vendor	0.12	0.04	1.85	0.89	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,886
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.36	1.33	1.41	18.3	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,048
Vendor	0.12	0.04	1.94	0.91	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,883
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.54	0.58	7.93	0.00	0.00	2.18	2.18	0.00	0.51	0.51	2,117
Vendor	0.05	0.02	0.80	0.37	0.01	0.01	0.22	0.22	0.01	0.06	0.07	778
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

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.11	1.45	0.00	0.00	0.40	0.40	0.00	0.09	0.09	350
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	129
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

3.10. Building Exterior (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.31	2.65	14.7	0.02	0.07	—	0.07	0.07	—	0.07	2,408
Onsite truck	0.03	0.01	0.31	0.23	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	77.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.31	2.65	14.7	0.02	0.07	—	0.07	0.07	—	0.07	2,408
Onsite truck	0.03	0.01	0.33	0.24	< 0.005	< 0.005	1.04	1.04	< 0.005	0.11	0.11	78.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.13	1.10	6.05	0.01	0.03	—	0.03	0.03	—	0.03	994
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	32.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	1.10	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	165
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	5.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.54	1.35	1.22	21.6	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,333
Vendor	0.12	0.04	1.85	0.89	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,886
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.36	1.33	1.41	18.3	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,048
Vendor	0.12	0.04	1.94	0.91	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,883
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.54	0.58	7.93	0.00	0.00	2.18	2.18	0.00	0.51	0.51	2,117
Vendor	0.05	0.02	0.80	0.37	0.01	0.01	0.22	0.22	0.01	0.06	0.07	778
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.11	1.45	0.00	0.00	0.40	0.40	0.00	0.09	0.09	350
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	129
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

3.11. Foundation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.19	0.16	1.23	0.86	< 0.005	0.05	—	0.05	0.05	—	0.05	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.44
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.93
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.64
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.44	5.47	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,427
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.35	0.00	0.00	0.09	0.09	0.00	0.02	0.02	88.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	14.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.13
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

3.12. Foundation (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.23	0.86	< 0.005	0.05	—	0.05	0.05	—	0.05	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.44
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.93
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.64
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.44	5.47	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,427
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.02	0.03	0.35	0.00	0.00	0.09	0.09	0.00	0.02	0.02	88.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	14.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.13
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

3.13. Foundation (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.22	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	18.9
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.95
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.13
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.37	0.39	5.09	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,403
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	304
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	165
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	35.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	27.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.81
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

3.14. Foundation (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.22	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.14	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	18.9
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.95
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.13
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.37	0.39	5.09	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,403
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	304
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	165
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	35.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	27.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.81
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

3.15. Paving (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	5.38	8.24	0.01	0.15	—	0.15	0.14	—	0.14	1,278
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	84.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.9
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.84	0.00	0.00	0.26	0.26	0.00	0.06	0.06	242
Vendor	0.03	0.01	0.60	0.28	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	589
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	16.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	38.7

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.68
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.42
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

3.16. Paving (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	5.38	8.24	0.01	0.15	—	0.15	0.14	—	0.14	1,278
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.07	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	84.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.9
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16

Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.84	0.00	0.00	0.26	0.26	0.00	0.06	0.06	242
Vendor	0.03	0.01	0.60	0.28	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	589
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	16.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	38.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.68
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.42
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

3.17. Architectural Coating (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.14	9.61	0.02	0.21	—	0.21	0.20	—	0.20	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.18

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.14	9.61	0.02	0.21	—	0.21	0.20	—	0.20	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.66	6.28	0.01	0.14	—	0.14	0.13	—	0.13	1,271
Architectural Coatings	—	4.18	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	5.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.85	1.15	< 0.005	0.03	—	0.03	0.02	—	0.02	210
Architectural Coatings	—	0.76	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.70	0.63	11.2	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,758
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.70	0.69	0.73	9.46	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,610
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.45	0.48	6.49	0.00	0.00	1.78	1.78	0.00	0.42	0.42	1,733
Vendor	0.02	0.01	0.25	0.11	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	238
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.18	0.00	0.00	0.33	0.33	0.00	0.08	0.08	287
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	39.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.39	3.27	11.7	0.02	0.07	—	0.07	0.07	—	0.07	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.18
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.39	3.27	11.7	0.02	0.07	—	0.07	0.07	—	0.07	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.28	0.25	2.14	7.62	0.01	0.05	—	0.05	0.05	—	0.05	1,271
Architectural Coatings	—	4.18	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	5.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.39	1.39	< 0.005	0.01	—	0.01	0.01	—	0.01	210
Architectural Coatings	—	0.76	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.70	0.63	11.2	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,758
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.70	0.69	0.73	9.46	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,610
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.45	0.48	6.49	0.00	0.00	1.78	1.78	0.00	0.42	0.42	1,733
Vendor	0.02	0.01	0.25	0.11	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	238
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.18	0.00	0.00	0.33	0.33	0.00	0.08	0.08	287
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	39.5

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.98	9.59	0.02	0.20	—	0.20	0.19	—	0.19	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.12
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.81	1.11	< 0.005	0.02	—	0.02	0.02	—	0.02	225
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	37.2
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.66	0.64	8.85	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,568
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	353
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.08	0.00	0.00	0.32	0.32	0.00	0.07	0.07	301
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.06	0.06	0.00	0.01	0.01	49.9
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.76
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

3.20. Architectural Coating (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.38	3.26	11.6	0.02	0.07	—	0.07	0.07	—	0.07	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	8.12
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	1.34	< 0.005	0.01	—	0.01	0.01	—	0.01	225
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	37.2
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.66	0.64	8.85	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,568
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	353
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.08	0.00	0.00	0.32	0.32	0.00	0.07	0.07	301
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.06	0.06	0.00	0.01	0.01	49.9
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.76
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/1/2028	10/31/2028	5.00	43.0	—
Grading	Grading	11/1/2028	3/31/2029	5.00	108	—
Building Exterior	Building Construction	12/1/2028	7/30/2029	5.00	172	—
Foundation	Building Construction	12/1/2028	2/28/2029	5.00	64.0	—
Paving	Paving	1/1/2030	2/1/2030	5.00	24.0	—
Architectural Coating	Architectural Coating	2/1/2029	2/28/2030	5.00	281	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	1.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Average	1.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	1.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Architectural Coating	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Average	1.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	1.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	1.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29

Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	1.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	28.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	8.00	34.0	HHDT
Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	30.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	672	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	410	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	62.0	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	9.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	212	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	12.0	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.20	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	114	18.5	LDA,LDT1,LDT2
Foundation	Vendor	10.0	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.20	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	28.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	8.00	34.0	HHDT
Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	30.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	672	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	410	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	62.0	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2

Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	9.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	212	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	12.0	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.20	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	114	18.5	LDA,LDT1,LDT2
Foundation	Vendor	10.0	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.20	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Sweep paved roads once per month	9%	9%

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	290,865	96,955	—

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	83,219	—
Grading	—	150,000	109	0.00	—
Paving	0.00	0.00	0.00	0.00	0.50

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.50	0%
Industrial Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2028	1,361	690	0.05	0.01
2029	2,166	690	0.05	0.01
2030	805	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
Characteristics: Utility Information	SB100 Adjustment for Year 2028

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Construction Phase 4 Only (Mitigated)
Construction Start Date	9/1/2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	125	1000sqft	2.86	124,790	10,000	—	—	—

Industrial Park	69.1	1000sqft	1.59	69,120	10,000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.63	10.3	20.2	56.0	0.06	0.52	9.16	9.69	0.48	2.12	2.61	14,784
Mit.	3.28	9.21	10.3	60.5	0.06	0.16	9.16	9.32	0.15	2.12	2.27	14,784
% Reduced	29%	10%	49%	-8%	—	70%	—	4%	68%	—	13%	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.9	13.7	123	114	0.63	2.13	34.9	37.0	2.04	8.65	10.7	96,826
Mit.	9.28	11.6	104	122	0.63	1.35	34.9	36.2	1.33	8.65	9.98	96,826
% Reduced	22%	15%	15%	-7%	—	37%	—	2%	35%	—	7%	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.51	6.71	28.6	37.3	0.13	0.55	8.76	9.31	0.52	2.14	2.65	21,596
Mit.	2.59	5.98	22.0	40.1	0.13	0.29	8.76	9.05	0.29	2.14	2.42	21,596
% Reduced	26%	11%	23%	-8%	—	47%	—	3%	45%	—	9%	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.64	1.22	5.22	6.80	0.02	0.10	1.60	1.70	0.09	0.39	0.48	3,575
Mit.	0.47	1.09	4.02	7.33	0.02	0.05	1.60	1.65	0.05	0.39	0.44	3,575
% Reduced	26%	11%	23%	-8%	—	47%	—	3%	45%	—	9%	—

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.74	0.58	5.44	8.52	0.02	0.15	1.88	2.03	0.14	0.34	0.49	2,242
2029	4.63	10.3	20.2	56.0	0.06	0.52	9.16	9.69	0.48	2.12	2.61	14,784
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	10.6	5.92	119	98.1	0.61	1.98	32.0	34.0	1.91	7.97	9.88	94,001
2029	11.9	13.7	123	114	0.63	2.13	34.9	37.0	2.04	8.65	10.7	96,826
2030	2.46	8.53	14.2	28.1	0.04	0.37	3.37	3.74	0.34	0.79	1.13	7,008
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.15	0.61	14.2	10.4	0.07	0.23	3.52	3.75	0.22	0.87	1.10	10,824
2029	3.51	6.71	28.6	37.3	0.13	0.55	8.76	9.31	0.52	2.14	2.65	21,596
2030	0.24	0.95	1.33	2.83	< 0.005	0.03	0.36	0.39	0.03	0.08	0.12	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.21	0.11	2.59	1.90	0.01	0.04	0.64	0.68	0.04	0.16	0.20	1,792
2029	0.64	1.22	5.22	6.80	0.02	0.10	1.60	1.70	0.09	0.39	0.48	3,575
2030	0.04	0.17	0.24	0.52	< 0.005	0.01	0.07	0.07	0.01	0.02	0.02	117

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	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.28	0.22	2.94	8.53	0.02	0.03	1.88	1.91	0.03	0.34	0.37	2,242
2029	3.28	9.21	10.3	60.5	0.06	0.16	9.16	9.32	0.15	2.12	2.27	14,784
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
2028	8.47	4.20	103	104	0.61	1.28	32.0	33.3	1.27	7.97	9.24	94,001
2029	9.28	11.6	104	122	0.63	1.35	34.9	36.2	1.33	8.65	9.98	96,826
2030	1.92	8.11	10.4	30.1	0.04	0.23	3.37	3.61	0.22	0.79	1.01	7,008
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.89	0.40	12.3	10.9	0.07	0.15	3.52	3.67	0.15	0.87	1.02	10,824
2029	2.59	5.98	22.0	40.1	0.13	0.29	8.76	9.05	0.29	2.14	2.42	21,596
2030	0.18	0.90	0.90	3.07	< 0.005	0.02	0.36	0.38	0.02	0.08	0.10	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—
2028	0.16	0.07	2.25	1.99	0.01	0.03	0.64	0.67	0.03	0.16	0.19	1,792
2029	0.47	1.09	4.02	7.33	0.02	0.05	1.60	1.65	0.05	0.39	0.44	3,575
2030	0.03	0.16	0.16	0.56	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	117

3. Construction Emissions Details

3.1. Demolition (2028) - Unmitigated

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

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

Off-Road Equipment	0.57	0.47	4.32	6.54	0.01	0.14	—	0.14	0.13	—	0.13	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.57	0.47	4.32	6.54	0.01	0.14	—	0.14	0.13	—	0.13	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.67
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.51	0.77	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Demolition	—	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	18.2
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.58	0.00	0.00	0.37	0.37	0.00	0.09	0.09	371
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
Hauling	0.05	0.01	0.97	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.34	0.00	0.00	0.37	0.37	0.00	0.09	0.09	351

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
Hauling	0.05	0.01	1.00	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	920
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	42.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.95
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
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.0

3.2. Demolition (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.83	6.55	0.01	0.02	—	0.02	0.02	—	0.02	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.56
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.11	1.83	6.55	0.01	0.02	—	0.02	0.02	—	0.02	933
Demolition	—	—	—	—	—	—	1.23	1.23	—	0.19	0.19	—
Onsite truck	0.01	< 0.005	0.06	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	9.67
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.22	0.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	110
Demolition	—	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	18.2
Demolition	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.58	0.00	0.00	0.37	0.37	0.00	0.09	0.09	371
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
Hauling	0.05	0.01	0.97	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	922
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.34	0.00	0.00	0.37	0.37	0.00	0.09	0.09	351
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
Hauling	0.05	0.01	1.00	0.36	0.01	0.01	0.25	0.26	0.01	0.07	0.08	920
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	42.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.95
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
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.0

3.3. Grading (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	1.79	15.2	23.1	0.04	0.59	—	0.59	0.55	—	0.55	4,027
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	5.04	3.77	0.01	< 0.005	2.38	2.38	< 0.005	0.24	0.25	818
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	1.82	2.76	< 0.005	0.07	—	0.07	0.07	—	0.07	481
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.05	0.02	0.59	0.44	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	96.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.33	0.50	< 0.005	0.01	—	0.01	0.01	—	0.01	79.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	0.01	16.0
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.44	0.00	0.00	0.39	0.39	0.00	0.09	0.09	376
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
Hauling	4.39	0.87	84.1	30.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	77,308
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	45.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.53	0.11	10.2	3.57	0.06	0.12	2.50	2.62	0.12	0.68	0.81	9,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.54
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
Hauling	0.10	0.02	1.86	0.65	0.01	0.02	0.46	0.48	0.02	0.12	0.15	1,529

3.4. Grading (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.72	5.40	26.2	0.04	0.14	—	0.14	0.13	—	0.13	4,027

Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	5.04	3.77	0.01	< 0.005	2.38	2.38	< 0.005	0.24	0.25	818
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.64	3.13	< 0.005	0.02	—	0.02	0.02	—	0.02	481
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—
Onsite truck	0.05	0.02	0.59	0.44	< 0.005	< 0.005	0.27	0.27	< 0.005	0.03	0.03	96.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	79.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—
Onsite truck	0.01	< 0.005	0.11	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	0.01	16.0
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.10	0.12	1.44	0.00	0.00	0.39	0.39	0.00	0.09	0.09	376
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
Hauling	4.39	0.87	84.1	30.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	77,308
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	45.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.53	0.11	10.2	3.57	0.06	0.12	2.50	2.62	0.12	0.68	0.81	9,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	7.54
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
Hauling	0.10	0.02	1.86	0.65	0.01	0.02	0.46	0.48	0.02	0.12	0.15	1,529

3.5. Grading (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.07	1.73	14.5	23.1	0.04	0.54	—	0.54	0.50	—	0.50	4,026
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	4.98	3.77	0.01	< 0.005	2.38	2.38	< 0.005	0.24	0.25	805
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.30	2.56	4.07	0.01	0.10	—	0.10	0.09	—	0.09	709
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	0.08	0.04	0.85	0.65	< 0.005	< 0.005	0.39	0.39	< 0.005	0.04	0.04	141
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.47	0.74	< 0.005	0.02	—	0.02	0.02	—	0.02	117
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—

Onsite truck	0.01	0.01	0.16	0.12	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	23.3
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.10	1.34	0.00	0.00	0.39	0.39	0.00	0.09	0.09	369
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
Hauling	4.37	0.87	81.0	29.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	75,398
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.78	0.16	14.5	5.18	0.09	0.18	3.69	3.86	0.18	1.01	1.19	13,287
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.9
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
Hauling	0.14	0.03	2.64	0.95	0.02	0.03	0.67	0.71	0.03	0.18	0.22	2,200

3.6. Grading (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.71	5.36	26.2	0.04	0.13	—	0.13	0.12	—	0.12	4,026

Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—
Onsite truck	0.44	0.19	4.98	3.77	0.01	< 0.005	2.38	2.38	< 0.005	0.24	0.25	805
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	0.94	4.62	0.01	0.02	—	0.02	0.02	—	0.02	709
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—
Onsite truck	0.08	0.04	0.85	0.65	< 0.005	< 0.005	0.39	0.39	< 0.005	0.04	0.04	141
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.17	0.84	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	117
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—
Onsite truck	0.01	0.01	0.16	0.12	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	23.3
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.10	1.34	0.00	0.00	0.39	0.39	0.00	0.09	0.09	369
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
Hauling	4.37	0.87	81.0	29.0	0.52	1.01	21.2	22.2	1.01	5.80	6.81	75,398
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	66.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.78	0.16	14.5	5.18	0.09	0.18	3.69	3.86	0.18	1.01	1.19	13,287
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	10.9
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
Hauling	0.14	0.03	2.64	0.95	0.02	0.03	0.67	0.71	0.03	0.18	0.22	2,200

3.7. Building Exterior (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.94	12.3	0.02	0.32	—	0.32	0.29	—	0.29	2,409
Onsite truck	0.03	0.01	0.33	0.25	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	79.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.54	0.75	< 0.005	0.02	—	0.02	0.02	—	0.02	146
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	4.82
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.80
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Worker	1.59	1.39	1.59	19.7	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,133
Vendor	0.12	0.04	2.03	0.95	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,932
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.25	0.00	0.00	0.32	0.32	0.00	0.07	0.07	316
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	117
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	52.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	19.4
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

3.8. Building Exterior (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.31	2.66	14.7	0.02	0.07	—	0.07	0.07	—	0.07	2,409
Onsite truck	0.03	0.01	0.33	0.25	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	79.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.89	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	146
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	4.82
Annual	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.03	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	24.2
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.80
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.59	1.39	1.59	19.7	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,133
Vendor	0.12	0.04	2.03	0.95	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,932
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.08	0.10	1.25	0.00	0.00	0.32	0.32	0.00	0.07	0.07	316
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	117
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	52.4
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	19.4
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

3.9. Building Exterior (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.93	8.60	12.3	0.02	0.29	—	0.29	0.27	—	0.27	2,408

Onsite truck	0.03	0.01	0.31	0.23	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	77.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.93	8.60	12.3	0.02	0.29	—	0.29	0.27	—	0.27	2,408
Onsite truck	0.03	0.01	0.33	0.24	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	78.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.39	3.55	5.07	0.01	0.12	—	0.12	0.11	—	0.11	994
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	32.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.93	< 0.005	0.02	—	0.02	0.02	—	0.02	165
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	5.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.54	1.35	1.22	21.6	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,333
Vendor	0.12	0.04	1.85	0.89	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,886
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.36	1.33	1.41	18.3	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,048
Vendor	0.12	0.04	1.94	0.91	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,883
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.54	0.58	7.93	0.00	0.00	2.18	2.18	0.00	0.51	0.51	2,117
Vendor	0.05	0.02	0.80	0.37	0.01	0.01	0.22	0.22	0.01	0.06	0.07	778
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

Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.11	1.45	0.00	0.00	0.40	0.40	0.00	0.09	0.09	350
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	129
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

3.10. Building Exterior (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.31	2.65	14.7	0.02	0.07	—	0.07	0.07	—	0.07	2,408
Onsite truck	0.03	0.01	0.31	0.23	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	77.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.31	2.65	14.7	0.02	0.07	—	0.07	0.07	—	0.07	2,408
Onsite truck	0.03	0.01	0.33	0.24	< 0.005	< 0.005	0.38	0.38	< 0.005	0.04	0.04	78.2
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.13	1.10	6.05	0.01	0.03	—	0.03	0.03	—	0.03	994
Onsite truck	0.01	0.01	0.13	0.10	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	32.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	1.10	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	165
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	5.31
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.54	1.35	1.22	21.6	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,333
Vendor	0.12	0.04	1.85	0.89	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,886
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.36	1.33	1.41	18.3	0.00	0.00	5.36	5.36	0.00	1.26	1.26	5,048
Vendor	0.12	0.04	1.94	0.91	0.01	0.01	0.53	0.54	0.01	0.15	0.16	1,883
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.54	0.58	7.93	0.00	0.00	2.18	2.18	0.00	0.51	0.51	2,117
Vendor	0.05	0.02	0.80	0.37	0.01	0.01	0.22	0.22	0.01	0.06	0.07	778
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.11	1.45	0.00	0.00	0.40	0.40	0.00	0.09	0.09	350
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	129
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

3.11. Foundation (2028) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.19	0.16	1.23	0.86	< 0.005	0.05	—	0.05	0.05	—	0.05	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.44
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.93
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.64
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.44	5.47	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,427
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.35	0.00	0.00	0.09	0.09	0.00	0.02	0.02	88.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	14.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.13
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

3.12. Foundation (2028) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.23	0.86	< 0.005	0.05	—	0.05	0.05	—	0.05	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.44
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	9.93
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.51
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	1.64
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.44	5.47	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,427
Vendor	0.02	0.01	0.33	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	312
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.02	0.03	0.35	0.00	0.00	0.09	0.09	0.00	0.02	0.02	88.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	18.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	14.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	3.13
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

3.13. Foundation (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.22	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.14	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	18.9
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.95
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.13
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.37	0.39	5.09	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,403
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	304
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	165
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	35.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	27.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.81
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

3.14. Foundation (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.22	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	164
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.14	0.10	< 0.005	0.01	—	0.01	0.01	—	0.01	18.9
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.95
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.13
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.37	0.39	5.09	0.00	0.00	1.49	1.49	0.00	0.35	0.35	1,403
Vendor	0.02	0.01	0.31	0.15	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	304
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	165
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	35.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	27.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.81
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

3.15. Paving (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	5.38	8.24	0.01	0.15	—	0.15	0.14	—	0.14	1,278
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	84.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.9
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.84	0.00	0.00	0.26	0.26	0.00	0.06	0.06	242
Vendor	0.03	0.01	0.60	0.28	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	589
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	16.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	38.7

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.68
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.42
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

3.16. Paving (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	0.58	5.38	8.24	0.01	0.15	—	0.15	0.14	—	0.14	1,278
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.09	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	14.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.54	< 0.005	0.01	—	0.01	0.01	—	0.01	84.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.96
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.9
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16

Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.84	0.00	0.00	0.26	0.26	0.00	0.06	0.06	242
Vendor	0.03	0.01	0.60	0.28	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	589
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	16.2
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	38.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.68
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.42
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

3.17. Architectural Coating (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.14	9.61	0.02	0.21	—	0.21	0.20	—	0.20	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.18

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.99	0.83	7.14	9.61	0.02	0.21	—	0.21	0.20	—	0.20	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.54	4.66	6.28	0.01	0.14	—	0.14	0.13	—	0.13	1,271
Architectural Coatings	—	4.18	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	5.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.85	1.15	< 0.005	0.03	—	0.03	0.02	—	0.02	210
Architectural Coatings	—	0.76	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.70	0.63	11.2	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,758
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.70	0.69	0.73	9.46	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,610
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.45	0.48	6.49	0.00	0.00	1.78	1.78	0.00	0.42	0.42	1,733
Vendor	0.02	0.01	0.25	0.11	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	238
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.18	0.00	0.00	0.33	0.33	0.00	0.08	0.08	287
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	39.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2029) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.39	3.27	11.7	0.02	0.07	—	0.07	0.07	—	0.07	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.18
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.39	3.27	11.7	0.02	0.07	—	0.07	0.07	—	0.07	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.28	0.25	2.14	7.62	0.01	0.05	—	0.05	0.05	—	0.05	1,271
Architectural Coatings	—	4.18	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	5.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.39	1.39	< 0.005	0.01	—	0.01	0.01	—	0.01	210
Architectural Coatings	—	0.76	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.89
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.80	0.70	0.63	11.2	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,758
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.70	0.69	0.73	9.46	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,610
Vendor	0.02	0.01	0.37	0.18	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	365
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.45	0.48	6.49	0.00	0.00	1.78	1.78	0.00	0.42	0.42	1,733
Vendor	0.02	0.01	0.25	0.11	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	238
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.09	1.18	0.00	0.00	0.33	0.33	0.00	0.08	0.08	287
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	39.5

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	6.98	9.59	0.02	0.20	—	0.20	0.19	—	0.19	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.12
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.81	1.11	< 0.005	0.02	—	0.02	0.02	—	0.02	225
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	37.2
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.66	0.64	8.85	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,568
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	353
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.08	0.00	0.00	0.32	0.32	0.00	0.07	0.07	301
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.06	0.06	0.00	0.01	0.01	49.9
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.76
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

3.20. Architectural Coating (2030) - 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	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.38	3.26	11.6	0.02	0.07	—	0.07	0.07	—	0.07	1,945
Architectural Coatings	—	6.40	—	—	—	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.05	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	8.12
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	1.34	< 0.005	0.01	—	0.01	0.01	—	0.01	225
Architectural Coatings	—	0.74	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	37.2
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.67	0.66	0.64	8.85	0.00	0.00	2.77	2.77	0.00	0.65	0.65	2,568
Vendor	0.02	0.01	0.36	0.17	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	353
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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.08	0.00	0.00	0.32	0.32	0.00	0.07	0.07	301
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	40.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.06	0.06	0.00	0.01	0.01	49.9
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	6.76
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

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/1/2028	10/31/2028	5.00	43.0	—
Grading	Grading	11/1/2028	3/31/2029	5.00	108	—
Building Exterior	Building Construction	12/1/2028	7/30/2029	5.00	172	—
Foundation	Building Construction	12/1/2028	2/28/2029	5.00	64.0	—
Paving	Paving	1/1/2030	2/1/2030	5.00	24.0	—
Architectural Coating	Architectural Coating	2/1/2029	2/28/2030	5.00	281	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Grading	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Average	1.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Average	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Exterior	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Average	1.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	1.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Architectural Coating	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Average	1.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Average	1.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Demolition	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Demolition	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Grading	Bore/Drill Rigs	Diesel	Tier 4 Final	1.00	8.00	83.0	0.50
Grading	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Grading	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	82.0	0.42
Grading	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Grading	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36
Grading	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Building Exterior	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Building Exterior	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29

Building Exterior	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Building Exterior	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Building Exterior	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Building Exterior	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Building Exterior	Other Construction Equipment	Diesel	Tier 4 Final	1.00	8.00	82.0	0.42
Building Exterior	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Building Exterior	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Foundation	Cranes	Electric	Average	1.00	7.00	367	0.29
Foundation	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Signal Boards	Diesel	Average	1.00	8.00	6.00	0.82
Paving	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Paving	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Architectural Coating	Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31
Architectural Coating	Cranes	Electric	Tier 4 Final	1.00	8.00	367	0.29
Architectural Coating	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Architectural Coating	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Architectural Coating	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Architectural Coating	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	28.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	8.00	34.0	HHDT
Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	30.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	672	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	410	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	62.0	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	9.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	212	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	12.0	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.20	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	114	18.5	LDA,LDT1,LDT2
Foundation	Vendor	10.0	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.20	HHDT,MHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	28.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	0.00	10.2	HHDT,MHDT
Demolition	Hauling	8.00	34.0	HHDT
Demolition	Onsite truck	4.00	0.20	HHDT
Grading	—	—	—	—
Grading	Worker	30.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	0.00	10.2	HHDT,MHDT
Grading	Hauling	672	34.0	HHDT
Grading	Onsite truck	338	0.20	HHDT
Building Exterior	—	—	—	—
Building Exterior	Worker	410	18.5	LDA,LDT1,LDT2
Building Exterior	Vendor	62.0	10.2	HHDT,MHDT
Building Exterior	Hauling	0.00	20.0	HHDT
Building Exterior	Onsite truck	31.0	0.50	HHDT,MHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2

Paving	Vendor	20.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	9.00	0.20	HHDT,MHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	212	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	12.0	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	5.00	0.20	HHDT,MHDT
Foundation	—	—	—	—
Foundation	Worker	114	18.5	LDA,LDT1,LDT2
Foundation	Vendor	10.0	10.2	HHDT,MHDT
Foundation	Hauling	0.00	20.0	HHDT
Foundation	Onsite truck	5.00	0.20	HHDT,MHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Apply dust suppressants to unpaved roads	84%	84%
Sweep paved roads once per month	9%	9%

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	290,865	96,955	—

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 (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	83,219	—
Grading	—	150,000	109	0.00	—
Paving	0.00	0.00	0.00	0.00	0.50

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.50	0%
Industrial Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2028	1,361	690	0.05	0.01
2029	2,166	690	0.05	0.01
2030	805	690	0.05	0.01

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Construction: Dust From Material Movement	See Assumptions
Construction: Paving	see assumptions
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Radford - Operations - Existing Baseline Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Operations - Existing Baseline
Operational Year	2023
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	557	1000sqft	12.8	556,621	10,000	—	—	—

Industrial Park	360	1000sqft	8.26	359,730	10,000	—	—	—
High Turnover (Sit Down Restaurant)	7.25	1000sqft	0.17	7,249	500	—	—	—
Enclosed Parking with Elevator	2,097	Space	18.9	709,508	0.00	—	—	—
Strip Mall	255	1000sqft	5.70	255,510	10,000	—	—	—
Parking Lot	998	Space	3.72	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-1/S-2	Implement Waste Reduction Plan

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	34.3	57.6	26.4	256	0.47	0.75	37.3	38.1	0.72	9.48	10.2	86,555
Mit.	34.3	57.6	26.4	256	0.47	0.75	37.3	38.1	0.72	9.48	10.2	83,950
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	33.9	57.2	28.4	242	0.46	0.75	37.3	38.1	0.72	9.48	10.2	84,539

Mit.	33.9	57.2	28.4	242	0.46	0.75	37.3	38.1	0.72	9.48	10.2	81,933
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	34.7	57.9	28.6	245	0.46	0.76	36.7	37.5	0.73	9.34	10.1	85,165
Mit.	34.7	57.9	28.6	245	0.46	0.76	36.7	37.5	0.73	9.34	10.1	82,560
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.33	10.6	5.22	44.7	0.08	0.14	6.71	6.84	0.13	1.70	1.84	14,100
Mit.	6.33	10.6	5.22	44.7	0.08	0.14	6.71	6.84	0.13	1.70	1.84	13,669
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	31.1	28.5	20.7	219	0.44	0.31	37.3	37.6	0.29	9.48	9.77	45,850
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	34,429
Water	—	—	—	—	—	—	—	—	—	—	—	3,587
Waste	—	—	—	—	—	—	—	—	—	—	—	2,471
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	34.3	57.6	26.4	256	0.47	0.75	37.3	38.1	0.72	9.48	10.2	86,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	30.7	28.1	22.7	205	0.42	0.31	37.3	37.6	0.29	9.48	9.77	43,833
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110

Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	34,429
Water	—	—	—	—	—	—	—	—	—	—	—	3,587
Waste	—	—	—	—	—	—	—	—	—	—	—	2,471
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	33.9	57.2	28.4	242	0.46	0.75	37.3	38.1	0.72	9.48	10.2	84,539
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	30.5	27.9	22.9	209	0.43	0.31	36.7	37.1	0.29	9.34	9.63	44,415
Area	3.61	29.7	0.20	30.9	< 0.005	0.03	—	0.03	0.03	—	0.03	121
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	34,463
Water	—	—	—	—	—	—	—	—	—	—	—	3,587
Waste	—	—	—	—	—	—	—	—	—	—	—	2,471
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	34.7	57.9	28.6	245	0.46	0.76	36.7	37.5	0.73	9.34	10.1	85,165
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.56	5.09	4.19	38.2	0.08	0.06	6.71	6.76	0.05	1.70	1.76	7,353
Area	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Energy	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	5,706
Water	—	—	—	—	—	—	—	—	—	—	—	594
Waste	—	—	—	—	—	—	—	—	—	—	—	409
Refrig.	—	—	—	—	—	—	—	—	—	—	—	17.9
Total	6.33	10.6	5.22	44.7	0.08	0.14	6.71	6.84	0.13	1.70	1.84	14,100

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	31.1	28.5	20.7	219	0.44	0.31	37.3	37.6	0.29	9.48	9.77	45,850
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	34,429
Water	—	—	—	—	—	—	—	—	—	—	—	2,870
Waste	—	—	—	—	—	—	—	—	—	—	—	583
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	34.3	57.6	26.4	256	0.47	0.75	37.3	38.1	0.72	9.48	10.2	83,950
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	30.7	28.1	22.7	205	0.42	0.31	37.3	37.6	0.29	9.48	9.77	43,833
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	34,429
Water	—	—	—	—	—	—	—	—	—	—	—	2,870
Waste	—	—	—	—	—	—	—	—	—	—	—	583
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	33.9	57.2	28.4	242	0.46	0.75	37.3	38.1	0.72	9.48	10.2	81,933
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	30.5	27.9	22.9	209	0.43	0.31	36.7	37.1	0.29	9.34	9.63	44,415
Area	3.61	29.7	0.20	30.9	< 0.005	0.03	—	0.03	0.03	—	0.03	121
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	34,463
Water	—	—	—	—	—	—	—	—	—	—	—	2,870
Waste	—	—	—	—	—	—	—	—	—	—	—	583
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	34.7	57.9	28.6	245	0.46	0.76	36.7	37.5	0.73	9.34	10.1	82,560
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.56	5.09	4.19	38.2	0.08	0.06	6.71	6.76	0.05	1.70	1.76	7,353
Area	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Energy	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	5,706

Water	—	—	—	—	—	—	—	—	—	—	—	475
Waste	—	—	—	—	—	—	—	—	—	—	—	96.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	17.9
Total	6.33	10.6	5.22	44.7	0.08	0.14	6.71	6.84	0.13	1.70	1.84	13,669

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	12,334
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	7,964
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	328

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	3,640
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,435
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	27,899
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	12,334
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	7,964
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	328
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	3,640
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,435
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	27,899
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,048
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,318
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	54.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	603
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	569

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	32.7
Total	—	—	—	—	—	—	—	—	—	—	—	4,625

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	12,334
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	7,964
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	328
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	3,640
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,435
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	27,899
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	12,334
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	7,964
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	328

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	3,640
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,435
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	197
Total	—	—	—	—	—	—	—	—	—	—	—	27,899
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,048
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,318
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	54.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	603
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	569
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	32.7
Total	—	—	—	—	—	—	—	—	—	—	—	4,625

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323

High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323
High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.06	0.03	0.55	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	595
Industrial Park	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	385
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.5

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	65.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	1,081

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323
High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323

High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.06	0.03	0.55	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	595
Industrial Park	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	385
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.5
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	65.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	1,081

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.25	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.57	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.66	0.61	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Total	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0

4.3.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.25	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.57	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.66	0.61	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Total	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,750
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,472
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	39.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	326
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3,587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,750
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,472
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	39.0
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	326
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3,587
Annual	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	290
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	244
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.45
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	54.0
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	594

4.4.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,400
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,177
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	31.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	261
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2,870
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,400
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,177
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	31.2
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	261
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,870
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	232
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	195
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.16
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	43.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	475

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	976
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	841
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	163
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	492
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,471
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	976
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	841
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	163
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	492
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2,471
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	162
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	139
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	26.9
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	81.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	409

4.5.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	230
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	198
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	38.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	116
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	583
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	230
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	198
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	38.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	116
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	583
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	38.1
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	32.9
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.36
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	19.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	96.6

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55
Total	—	—	—	—	—	—	—	—	—	—	—	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55
Total	—	—	—	—	—	—	—	—	—	—	—	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.22

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	15.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.88
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	—	17.9

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55
Total	—	—	—	—	—	—	—	—	—	—	—	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55

Total	—	—	—	—	—	—	—	—	—	—	—	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.22
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	15.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.88
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	—	17.9

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	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	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	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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	7,783	7,783	7,783	2,840,795	52,567	52,567	52,567	19,186,955

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	7,783	7,783	7,783	2,840,795	52,567	52,567	52,567	19,186,955

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	1,794,786	590,041	59,059

5.10.3. Landscape Equipment

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	1.00	832	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	1.00	9.00	2,080	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	2.00	4.00	1,872	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	2.00	0.40	192	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	1.00	0.30	192	1.13	0.91
Chainsaws	Gasoline 2-Stroke	1.00	0.30	96.0	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	2.00	832	6.09	0.58
Leaf Blowers/Vacuums	Electric	6.00	3.00	4,368	1.79	0.94

5.10.4. Landscape Equipment - Mitigated

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	1.00	832	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	1.00	9.00	2,080	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	2.00	4.00	1,872	1.79	0.94

Lawn Mowers	Gasoline 4-Stroke	2.00	0.40	192	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	1.00	0.30	192	1.13	0.91
Chainsaws	Gasoline 2-Stroke	1.00	0.30	96.0	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	2.00	832	6.09	0.58
Leaf Blowers/Vacuums	Electric	6.00	3.00	4,368	1.79	0.94

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	8,866,277	504	0.0489	0.0069	11,183,551
Industrial Park	5,730,049	504	0.0489	0.0069	7,227,644
High Turnover (Sit Down Restaurant)	236,101	504	0.0489	0.0069	686,695
Enclosed Parking with Elevator	2,619,100	504	0.0489	0.0069	0.00
Strip Mall	2,471,819	504	0.0489	0.0069	1,222,472
Parking Lot	142,100	504	0.0489	0.0069	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	8,866,277	504	0.0489	0.0069	11,183,551
Industrial Park	5,730,049	504	0.0489	0.0069	7,227,644
High Turnover (Sit Down Restaurant)	236,101	504	0.0489	0.0069	686,695
Enclosed Parking with Elevator	2,619,100	504	0.0489	0.0069	0.00

Strip Mall	2,471,819	504	0.0489	0.0069	1,222,472
Parking Lot	142,100	504	0.0489	0.0069	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	98,930,337	140,246
Industrial Park	83,187,563	140,246
High Turnover (Sit Down Restaurant)	2,200,316	7,012
Enclosed Parking with Elevator	0.00	0.00
Strip Mall	18,389,318	140,246
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	79,144,269	112,197
Industrial Park	66,550,050	112,197
High Turnover (Sit Down Restaurant)	1,760,253	5,610
Enclosed Parking with Elevator	0.00	0.00
Strip Mall	14,711,455	112,197
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	518	—
Industrial Park	446	—
High Turnover (Sit Down Restaurant)	86.3	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	261	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	122	—
Industrial Park	105	—
High Turnover (Sit Down Restaurant)	20.4	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	61.5	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0

High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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)

8. User Changes to Default Data

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Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions

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Operations: Energy Use	See Energy Calculations
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Radford - Operations - Existing Buildout Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Operations - Existing Buildout
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	557	1000sqft	12.8	556,621	10,000	—	—	—

Industrial Park	360	1000sqft	8.26	359,730	10,000	—	—	—
High Turnover (Sit Down Restaurant)	7.25	1000sqft	0.17	7,249	500	—	—	—
Enclosed Parking with Elevator	2,097	Space	18.9	709,508	0.00	—	—	—
Strip Mall	255	1000sqft	5.70	255,510	10,000	—	—	—
Parking Lot	998	Space	3.72	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-1/S-2	Implement Waste Reduction Plan

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	27.7	51.6	19.9	203	0.43	0.68	37.3	38.0	0.66	9.47	10.1	75,106
Mit.	27.7	51.6	19.9	203	0.43	0.68	37.3	38.0	0.66	9.47	10.1	72,584
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	27.4	51.3	21.2	192	0.41	0.68	37.3	38.0	0.66	9.47	10.1	73,376

Mit.	27.4	51.3	21.2	192	0.41	0.68	37.3	38.0	0.66	9.47	10.1	70,854
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	28.2	52.0	21.3	194	0.42	0.69	36.7	37.4	0.66	9.33	9.99	73,903
Mit.	28.2	52.0	21.3	194	0.42	0.69	36.7	37.4	0.66	9.33	9.99	71,381
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.15	9.50	3.89	35.4	0.08	0.13	6.70	6.83	0.12	1.70	1.82	12,236
Mit.	5.15	9.50	3.89	35.4	0.08	0.13	6.70	6.83	0.12	1.70	1.82	11,818
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.4	22.5	14.2	165	0.39	0.24	37.3	37.5	0.22	9.47	9.69	40,867
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	28,379
Water	—	—	—	—	—	—	—	—	—	—	—	3,171
Waste	—	—	—	—	—	—	—	—	—	—	—	2,471
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	27.7	51.6	19.9	203	0.43	0.68	37.3	38.0	0.66	9.47	10.1	75,106
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.2	22.2	15.5	155	0.38	0.24	37.3	37.5	0.22	9.47	9.69	39,137
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110

Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	28,379
Water	—	—	—	—	—	—	—	—	—	—	—	3,171
Waste	—	—	—	—	—	—	—	—	—	—	—	2,471
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	27.4	51.3	21.2	192	0.41	0.68	37.3	38.0	0.66	9.47	10.1	73,376
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.0	22.0	15.6	158	0.38	0.24	36.7	37.0	0.22	9.33	9.55	39,627
Area	3.61	29.7	0.20	30.9	< 0.005	0.03	—	0.03	0.03	—	0.03	121
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	28,406
Water	—	—	—	—	—	—	—	—	—	—	—	3,171
Waste	—	—	—	—	—	—	—	—	—	—	—	2,471
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	28.2	52.0	21.3	194	0.42	0.69	36.7	37.4	0.66	9.33	9.99	73,903
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.38	4.02	2.85	28.9	0.07	0.04	6.70	6.74	0.04	1.70	1.74	6,561
Area	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Energy	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	4,703
Water	—	—	—	—	—	—	—	—	—	—	—	525
Waste	—	—	—	—	—	—	—	—	—	—	—	409
Refrig.	—	—	—	—	—	—	—	—	—	—	—	17.9
Total	5.15	9.50	3.89	35.4	0.08	0.13	6.70	6.83	0.12	1.70	1.82	12,236

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	24.4	22.5	14.2	165	0.39	0.24	37.3	37.5	0.22	9.47	9.69	40,867
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	28,379
Water	—	—	—	—	—	—	—	—	—	—	—	2,536
Waste	—	—	—	—	—	—	—	—	—	—	—	583
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	27.7	51.6	19.9	203	0.43	0.68	37.3	38.0	0.66	9.47	10.1	72,584
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.2	22.2	15.5	155	0.38	0.24	37.3	37.5	0.22	9.47	9.69	39,137
Area	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	28,379
Water	—	—	—	—	—	—	—	—	—	—	—	2,536
Waste	—	—	—	—	—	—	—	—	—	—	—	583
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	27.4	51.3	21.2	192	0.41	0.68	37.3	38.0	0.66	9.47	10.1	70,854
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.0	22.0	15.6	158	0.38	0.24	36.7	37.0	0.22	9.33	9.55	39,627
Area	3.61	29.7	0.20	30.9	< 0.005	0.03	—	0.03	0.03	—	0.03	121
Energy	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	28,406
Water	—	—	—	—	—	—	—	—	—	—	—	2,536
Waste	—	—	—	—	—	—	—	—	—	—	—	583
Refrig.	—	—	—	—	—	—	—	—	—	—	—	108
Total	28.2	52.0	21.3	194	0.42	0.69	36.7	37.4	0.66	9.33	9.99	71,381
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.38	4.02	2.85	28.9	0.07	0.04	6.70	6.74	0.04	1.70	1.74	6,561
Area	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Energy	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	4,703

Water	—	—	—	—	—	—	—	—	—	—	—	420
Waste	—	—	—	—	—	—	—	—	—	—	—	96.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	17.9
Total	5.15	9.50	3.89	35.4	0.08	0.13	6.70	6.83	0.12	1.70	1.82	11,818

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	9,659
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	6,237
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	257

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	2,851
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,690
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	155
Total	—	—	—	—	—	—	—	—	—	—	—	21,849
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	9,659
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	6,237
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	257
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	2,851
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,690
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	155
Total	—	—	—	—	—	—	—	—	—	—	—	21,849
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,604
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,033
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	42.5
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	472
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	445

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	25.6
Total	—	—	—	—	—	—	—	—	—	—	—	3,622

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	9,659
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	6,237
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	257
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	2,851
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,690
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	155
Total	—	—	—	—	—	—	—	—	—	—	—	21,849
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	9,659
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	6,237
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	257

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	2,851
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	2,690
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	155
Total	—	—	—	—	—	—	—	—	—	—	—	21,849
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,604
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,033
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	42.5
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	472
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	445
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	25.6
Total	—	—	—	—	—	—	—	—	—	—	—	3,622

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323

High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323
High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.06	0.03	0.55	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	595
Industrial Park	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	385
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.5

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	65.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	1,081

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323
High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.33	0.17	3.00	2.52	0.02	0.23	—	0.23	0.23	—	0.23	3,594
Industrial Park	0.21	0.11	1.94	1.63	0.01	0.15	—	0.15	0.15	—	0.15	2,323

High Turnover (Sit Down Restaurant)	0.02	0.01	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	221
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.04	0.02	0.33	0.28	< 0.005	0.02	—	0.02	0.02	—	0.02	393
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.60	0.30	5.46	4.58	0.03	0.41	—	0.41	0.41	—	0.41	6,530
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.06	0.03	0.55	0.46	< 0.005	0.04	—	0.04	0.04	—	0.04	595
Industrial Park	0.04	0.02	0.35	0.30	< 0.005	0.03	—	0.03	0.03	—	0.03	385
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	36.5
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	65.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.11	0.05	1.00	0.84	0.01	0.08	—	0.08	0.08	—	0.08	1,081

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.25	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.57	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.66	0.61	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Total	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0

4.3.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	23.3	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	3.10	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.63	2.43	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Total	2.63	28.8	0.21	32.6	< 0.005	0.02	—	0.02	0.02	—	0.02	110
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	4.25	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.57	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.66	0.61	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0
Total	0.66	5.42	0.04	5.64	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	20.0

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,547
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,301
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	34.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	288
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3,171
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,547
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,301
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	34.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	288
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3,171
Annual	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	256
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	215
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.70
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	47.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	525

4.4.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,238
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,041
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	27.5
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	231
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2,536
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,238
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,041
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	27.5
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	231
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,536
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	205
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	172
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	4.56
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	38.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	420

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	976
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	841
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	163
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	492
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2,471
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	976
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	841
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	163
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	492
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	2,471
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	162
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	139
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	26.9
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	81.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	409

4.5.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	230
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	198
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	38.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	116
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	583
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	230
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	198
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	38.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	116
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	583
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	38.1
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	32.9
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	6.36
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	19.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	96.6

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55
Total	—	—	—	—	—	—	—	—	—	—	—	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55
Total	—	—	—	—	—	—	—	—	—	—	—	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.22

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	15.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.88
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	—	17.9

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55
Total	—	—	—	—	—	—	—	—	—	—	—	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.35
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	93.6
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	11.3
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.55

Total	—	—	—	—	—	—	—	—	—	—	—	108
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.22
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	15.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1.88
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.26
Total	—	—	—	—	—	—	—	—	—	—	—	17.9

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	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	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	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	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	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	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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	7,783	7,783	7,783	2,840,795	52,567	52,567	52,567	19,186,955

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	7,783	7,783	7,783	2,840,795	52,567	52,567	52,567	19,186,955

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	1,794,786	590,041	59,059

5.10.3. Landscape Equipment

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	1.00	832	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	1.00	9.00	2,080	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	2.00	4.00	1,872	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	2.00	0.40	192	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	1.00	0.30	192	1.13	0.91
Chainsaws	Gasoline 2-Stroke	1.00	0.30	96.0	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	2.00	832	6.09	0.58
Leaf Blowers/Vacuums	Electric	6.00	3.00	4,368	1.79	0.94

5.10.4. Landscape Equipment - Mitigated

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	1.00	832	1.13	0.91

Other Lawn & Garden Equipment	Gasoline 4-Stroke	1.00	9.00	2,080	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	2.00	4.00	1,872	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	2.00	0.40	192	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	1.00	0.30	192	1.13	0.91
Chainsaws	Gasoline 2-Stroke	1.00	0.30	96.0	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	2.00	832	6.09	0.58
Leaf Blowers/Vacuums	Electric	6.00	3.00	4,368	1.79	0.94

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	8,866,277	394	0.0489	0.0069	11,183,551
Industrial Park	5,730,049	394	0.0489	0.0069	7,227,644
High Turnover (Sit Down Restaurant)	236,101	394	0.0489	0.0069	686,695
Enclosed Parking with Elevator	2,619,100	394	0.0489	0.0069	0.00
Strip Mall	2,471,819	394	0.0489	0.0069	1,222,472
Parking Lot	142,100	394	0.0489	0.0069	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	8,866,277	394	0.0489	0.0069	11,183,551
Industrial Park	5,730,049	394	0.0489	0.0069	7,227,644

High Turnover (Sit Down Restaurant)	236,101	394	0.0489	0.0069	686,695
Enclosed Parking with Elevator	2,619,100	394	0.0489	0.0069	0.00
Strip Mall	2,471,819	394	0.0489	0.0069	1,222,472
Parking Lot	142,100	394	0.0489	0.0069	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	98,930,337	140,246
Industrial Park	83,187,563	140,246
High Turnover (Sit Down Restaurant)	2,200,316	7,012
Enclosed Parking with Elevator	0.00	0.00
Strip Mall	18,389,318	140,246
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	79,144,269	112,197
Industrial Park	66,550,050	112,197
High Turnover (Sit Down Restaurant)	1,760,253	5,610
Enclosed Parking with Elevator	0.00	0.00
Strip Mall	14,711,455	112,197
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	518	—
Industrial Park	446	—
High Turnover (Sit Down Restaurant)	86.3	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	261	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	122	—
Industrial Park	105	—
High Turnover (Sit Down Restaurant)	20.4	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	61.5	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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

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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)

8. User Changes to Default Data

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Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Land Use	See Project Description
Operations: Energy Use	See Energy Calculations
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Radford - Operations - Project Buildout Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Operations - Project Buildout
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	1,418	1000sqft	32.5	1,417,751	10,000	—	—	—

Industrial Park	450	1000sqft	10.3	450,000	10,000	—	—	—
High Turnover (Sit Down Restaurant)	32.2	1000sqft	2.00	32,249	500	—	—	—
Enclosed Parking with Elevator	5,775	Space	52.0	1,613,761	500	—	—	—
Strip Mall	300	1000sqft	6.89	300,000	500	—	—	—
Parking Lot	275	Space	1.03	0.00	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-1/S-2	Implement Waste Reduction Plan

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	57.0	102	33.6	415	0.85	0.80	78.0	78.8	0.75	19.8	20.6	155,071
Mit.	57.0	102	33.6	415	0.85	0.80	78.0	78.8	0.75	19.8	20.6	150,143
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	56.6	101	36.3	393	0.81	0.80	78.0	78.8	0.75	19.8	20.6	151,451

Mit.	56.6	101	36.3	393	0.81	0.80	78.0	78.8	0.75	19.8	20.6	146,524
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	63.8	108	36.9	453	0.82	0.88	76.8	77.7	0.81	19.5	20.3	152,772
Mit.	63.8	108	36.9	453	0.82	0.88	76.8	77.7	0.81	19.5	20.3	147,844
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	19.7	6.73	82.7	0.15	0.16	14.0	14.2	0.15	3.56	3.71	25,293
Mit.	11.7	19.7	6.73	82.7	0.15	0.16	14.0	14.2	0.15	3.56	3.71	24,477
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.5	47.3	29.8	347	0.82	0.50	78.0	78.5	0.47	19.8	20.3	85,542
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	58,195
Water	—	—	—	—	—	—	—	—	—	—	—	6,088
Waste	—	—	—	—	—	—	—	—	—	—	—	4,856
Refrig.	—	—	—	—	—	—	—	—	—	—	—	173
Total	57.0	102	33.6	415	0.85	0.80	78.0	78.8	0.75	19.8	20.6	155,071
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.0	46.8	32.6	325	0.79	0.50	78.0	78.5	0.47	19.8	20.3	81,922
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217

Energy	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	58,195
Water	—	—	—	—	—	—	—	—	—	—	—	6,088
Waste	—	—	—	—	—	—	—	—	—	—	—	4,856
Refrig.	—	—	—	—	—	—	—	—	—	—	—	173
Total	56.6	101	36.3	393	0.81	0.80	78.0	78.8	0.75	19.8	20.6	151,451
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	50.6	46.4	32.8	332	0.80	0.50	76.8	77.3	0.47	19.5	20.0	82,947
Area	12.9	61.5	0.77	118	0.01	0.12	—	0.12	0.09	—	0.09	445
Energy	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	58,263
Water	—	—	—	—	—	—	—	—	—	—	—	6,088
Waste	—	—	—	—	—	—	—	—	—	—	—	4,856
Refrig.	—	—	—	—	—	—	—	—	—	—	—	173
Total	63.8	108	36.9	453	0.82	0.88	76.8	77.7	0.81	19.5	20.3	152,772
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.24	8.47	5.99	60.6	0.15	0.09	14.0	14.1	0.09	3.56	3.65	13,733
Area	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Energy	0.07	0.03	0.60	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	9,646
Water	—	—	—	—	—	—	—	—	—	—	—	1,008
Waste	—	—	—	—	—	—	—	—	—	—	—	804
Refrig.	—	—	—	—	—	—	—	—	—	—	—	28.6
Total	11.7	19.7	6.73	82.7	0.15	0.16	14.0	14.2	0.15	3.56	3.71	25,293

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	51.5	47.3	29.8	347	0.82	0.50	78.0	78.5	0.47	19.8	20.3	85,542
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	58,195
Water	—	—	—	—	—	—	—	—	—	—	—	4,871
Waste	—	—	—	—	—	—	—	—	—	—	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	173
Total	57.0	102	33.6	415	0.85	0.80	78.0	78.8	0.75	19.8	20.6	150,143
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.0	46.8	32.6	325	0.79	0.50	78.0	78.5	0.47	19.8	20.3	81,922
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	58,195
Water	—	—	—	—	—	—	—	—	—	—	—	4,871
Waste	—	—	—	—	—	—	—	—	—	—	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	173
Total	56.6	101	36.3	393	0.81	0.80	78.0	78.8	0.75	19.8	20.6	146,524
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	50.6	46.4	32.8	332	0.80	0.50	76.8	77.3	0.47	19.5	20.0	82,947
Area	12.9	61.5	0.77	118	0.01	0.12	—	0.12	0.09	—	0.09	445
Energy	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	58,263
Water	—	—	—	—	—	—	—	—	—	—	—	4,871
Waste	—	—	—	—	—	—	—	—	—	—	—	1,146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	173
Total	63.8	108	36.9	453	0.82	0.88	76.8	77.7	0.81	19.5	20.3	147,844
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.24	8.47	5.99	60.6	0.15	0.09	14.0	14.1	0.09	3.56	3.65	13,733
Area	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Energy	0.07	0.03	0.60	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	9,646

Water	—	—	—	—	—	—	—	—	—	—	—	806
Waste	—	—	—	—	—	—	—	—	—	—	—	190
Refrig.	—	—	—	—	—	—	—	—	—	—	—	28.6
Total	11.7	19.7	6.73	82.7	0.15	0.16	14.0	14.2	0.15	3.56	3.71	24,477

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	33,046
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	8,281
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,302
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	54,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	33,046
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	8,281
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,302
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	54,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5,482
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,371
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	191
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	1,082
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	712

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	—	—	—	—	—	8,990

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	33,046
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	8,281
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,302
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	54,234
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	33,046
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	8,281
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	4,302
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	54,234
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	5,482
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,371
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	191
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	1,082
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	712
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	—	—	—	—	—	8,990

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.06	1.17	0.98	0.01	0.09	—	0.09	0.09	—	0.09	1,402
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443

High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	3,961
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.06	1.17	0.98	0.01	0.09	—	0.09	0.09	—	0.09	1,402
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443
High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	3,961
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	232
Industrial Park	0.02	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	239
High Turnover (Sit Down Restaurant)	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	163

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.07	0.03	0.60	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	656

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.06	1.17	0.98	0.01	0.09	—	0.09	0.09	—	0.09	1,402
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443
High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	3,961
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.06	1.17	0.98	0.01	0.09	—	0.09	0.09	—	0.09	1,402
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443

High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.36	0.18	3.31	2.78	0.02	0.25	—	0.25	0.25	—	0.25	3,961
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	232
Industrial Park	0.02	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	239
High Turnover (Sit Down Restaurant)	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	163
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.07	0.03	0.60	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	656

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	7.98	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.08	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.35	2.17	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Total	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7

4.3.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	7.98	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.08	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.35	2.17	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Total	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,953
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,633
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	154
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	349
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	6,088
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,953
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,633
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	154
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	349
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	6,088
Annual	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	654
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	270
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	25.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	57.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	1,008

4.4.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,163
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,306
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	123
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.03
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	279
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.03

Total	—	—	—	—	—	—	—	—	—	—	—	4,871
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,163
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,306
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	123
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.03
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	279
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	4,871
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	524
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	216
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	20.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	46.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	806

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,486
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,052
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	724
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	594
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4,856
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,486
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,052
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	724
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	594
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	4,856
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	412
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	174
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	120
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	98.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	804

4.5.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	587
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	248
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	171
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	140
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,146
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	587
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	248
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	171
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	140
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,146
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	97.1
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	41.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	28.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	23.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	190

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	117
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.87
Total	—	—	—	—	—	—	—	—	—	—	—	173
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	117
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.87
Total	—	—	—	—	—	—	—	—	—	—	—	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.57

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	19.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.35
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.31
Total	—	—	—	—	—	—	—	—	—	—	—	28.6

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	117
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.87
Total	—	—	—	—	—	—	—	—	—	—	—	173
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	117
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.87

Total	—	—	—	—	—	—	—	—	—	—	—	173
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.57
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	19.4
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.35
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.31
Total	—	—	—	—	—	—	—	—	—	—	—	28.6

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	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	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	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	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	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	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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	16,435	16,435	16,435	5,998,775	109,996	109,996	109,996	40,148,540

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	16,435	16,435	16,435	5,998,775	109,996	109,996	109,996	40,148,540

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	3,401,881	1,111,320	138,531

5.10.3. Landscape Equipment

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	9.00	1.00	1,248	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	9.00	4,160	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	4.00	4.00	3,744	1.79	0.94
Leaf Blowers/Vacuums	Electric	9.00	3.00	6,552	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	4.00	0.40	384	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	0.30	384	1.13	0.91
Chainsaws	Gasoline 2-Stroke	6.00	0.20	192	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	4.00	2.00	1,664	6.09	0.58

5.10.4. Landscape Equipment - Mitigated

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	9.00	1.00	1,248	1.13	0.91

Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	9.00	4,160	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	4.00	4.00	3,744	1.79	0.94
Leaf Blowers/Vacuums	Electric	9.00	3.00	6,552	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	4.00	0.40	384	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	0.30	384	1.13	0.91
Chainsaws	Gasoline 2-Stroke	6.00	0.20	192	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	4.00	2.00	1,664	6.09	0.58

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	30,121,380	397	0.0489	0.0069	4,363,570
Industrial Park	7,550,914	397	0.0489	0.0069	4,488,923
High Turnover (Sit Down Restaurant)	1,050,353	397	0.0489	0.0069	3,054,936
Enclosed Parking with Elevator	5,957,088	397	0.0489	0.0069	0.00
Strip Mall	3,923,106	397	0.0489	0.0069	419,241
Parking Lot	838,560	397	0.0489	0.0069	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	30,121,380	397	0.0489	0.0069	4,363,570
Industrial Park	7,550,914	397	0.0489	0.0069	4,488,923

High Turnover (Sit Down Restaurant)	1,050,353	397	0.0489	0.0069	3,054,936
Enclosed Parking with Elevator	5,957,088	397	0.0489	0.0069	0.00
Strip Mall	3,923,106	397	0.0489	0.0069	419,241
Parking Lot	838,560	397	0.0489	0.0069	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	251,982,199	140,246
Industrial Park	104,062,500	140,246
High Turnover (Sit Down Restaurant)	9,788,659	7,012
Enclosed Parking with Elevator	0.00	7,012
Strip Mall	22,221,756	7,012
Parking Lot	0.00	7,012

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	201,585,759	112,197
Industrial Park	83,250,000	112,197
High Turnover (Sit Down Restaurant)	7,830,927	5,610
Enclosed Parking with Elevator	0.00	5,610
Strip Mall	17,777,405	5,610
Parking Lot	0.00	5,610

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	1,319	—
Industrial Park	558	—
High Turnover (Sit Down Restaurant)	384	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	315	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	311	—
Industrial Park	132	—
High Turnover (Sit Down Restaurant)	90.6	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	74.3	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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

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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)

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Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Land Use	See Project Description
Operations: Energy Use	Adjustment for MBS energy usage. All-Electric
Operations: Consumer Products	Adjustment for SCAQMD jurisdiction
Characteristics: Utility Information	SB100 Adjustment. Year 2028

Radford - Operations - Land Use Exchange Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Operations - Land Use Exchange
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	34.14481004698251, -118.39119273923936
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	1,418	1000sqft	32.5	1,417,751	10,000	—	—	—

Industrial Park	575	1000sqft	13.2	575,000	10,000	—	—	—
High Turnover (Sit Down Restaurant)	32.2	1000sqft	2.00	32,249	500	—	—	—
Enclosed Parking with Elevator	5,775	Space	52.0	1,613,761	500	—	—	—
Strip Mall	175	1000sqft	4.02	175,000	500	—	—	—
Parking Lot	275	Space	1.03	0.00	500	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-1/S-2	Implement Waste Reduction Plan

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	57.6	103	34.0	419	0.86	0.81	78.9	79.7	0.76	20.0	20.8	150,391
Mit.	57.6	103	34.0	419	0.86	0.81	78.9	79.7	0.76	20.0	20.8	145,368
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	57.1	102	36.7	396	0.82	0.81	78.9	79.7	0.76	20.0	20.8	146,730

Mit.	57.1	102	36.7	396	0.82	0.81	78.9	79.7	0.76	20.0	20.8	141,707
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	64.4	109	37.3	457	0.83	0.89	77.7	78.6	0.82	19.7	20.6	148,062
Mit.	64.4	109	37.3	457	0.83	0.89	77.7	78.6	0.82	19.7	20.6	143,039
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.8	19.8	6.81	83.4	0.15	0.16	14.2	14.3	0.15	3.60	3.75	24,513
Mit.	11.8	19.8	6.81	83.4	0.15	0.16	14.2	14.3	0.15	3.60	3.75	23,682
% Reduced	—	—	—	—	—	—	—	—	—	—	—	3%

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	52.1	47.9	30.2	351	0.83	0.51	78.9	79.4	0.47	20.0	20.5	86,529
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	52,144
Water	—	—	—	—	—	—	—	—	—	—	—	6,397
Waste	—	—	—	—	—	—	—	—	—	—	—	4,901
Refrig.	—	—	—	—	—	—	—	—	—	—	—	205
Total	57.6	103	34.0	419	0.86	0.81	78.9	79.7	0.76	20.0	20.8	150,391
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.6	47.4	33.0	329	0.80	0.51	78.9	79.4	0.47	20.0	20.5	82,868
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217

Energy	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	52,144
Water	—	—	—	—	—	—	—	—	—	—	—	6,397
Waste	—	—	—	—	—	—	—	—	—	—	—	4,901
Refrig.	—	—	—	—	—	—	—	—	—	—	—	205
Total	57.1	102	36.7	396	0.82	0.81	78.9	79.7	0.76	20.0	20.8	146,730
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.2	47.0	33.2	336	0.81	0.51	77.7	78.2	0.47	19.7	20.2	83,904
Area	12.9	61.5	0.77	118	0.01	0.12	—	0.12	0.09	—	0.09	445
Energy	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	52,211
Water	—	—	—	—	—	—	—	—	—	—	—	6,397
Waste	—	—	—	—	—	—	—	—	—	—	—	4,901
Refrig.	—	—	—	—	—	—	—	—	—	—	—	205
Total	64.4	109	37.3	457	0.83	0.89	77.7	78.6	0.82	19.7	20.6	148,062
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.34	8.57	6.06	61.3	0.15	0.09	14.2	14.3	0.09	3.60	3.69	13,891
Area	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Energy	0.07	0.03	0.61	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	8,644
Water	—	—	—	—	—	—	—	—	—	—	—	1,059
Waste	—	—	—	—	—	—	—	—	—	—	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	33.9
Total	11.8	19.8	6.81	83.4	0.15	0.16	14.2	14.3	0.15	3.60	3.75	24,513

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	52.1	47.9	30.2	351	0.83	0.51	78.9	79.4	0.47	20.0	20.5	86,529
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	52,144
Water	—	—	—	—	—	—	—	—	—	—	—	5,117
Waste	—	—	—	—	—	—	—	—	—	—	—	1,157
Refrig.	—	—	—	—	—	—	—	—	—	—	—	205
Total	57.6	103	34.0	419	0.86	0.81	78.9	79.7	0.76	20.0	20.8	145,368
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.6	47.4	33.0	329	0.80	0.51	78.9	79.4	0.47	20.0	20.5	82,868
Area	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	52,144
Water	—	—	—	—	—	—	—	—	—	—	—	5,117
Waste	—	—	—	—	—	—	—	—	—	—	—	1,157
Refrig.	—	—	—	—	—	—	—	—	—	—	—	205
Total	57.1	102	36.7	396	0.82	0.81	78.9	79.7	0.76	20.0	20.8	141,707
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	51.2	47.0	33.2	336	0.81	0.51	77.7	78.2	0.47	19.7	20.2	83,904
Area	12.9	61.5	0.77	118	0.01	0.12	—	0.12	0.09	—	0.09	445
Energy	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	52,211
Water	—	—	—	—	—	—	—	—	—	—	—	5,117
Waste	—	—	—	—	—	—	—	—	—	—	—	1,157
Refrig.	—	—	—	—	—	—	—	—	—	—	—	205
Total	64.4	109	37.3	457	0.83	0.89	77.7	78.6	0.82	19.7	20.6	143,039
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.34	8.57	6.06	61.3	0.15	0.09	14.2	14.3	0.09	3.60	3.69	13,891
Area	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Energy	0.07	0.03	0.61	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	8,644

Water	—	—	—	—	—	—	—	—	—	—	—	847
Waste	—	—	—	—	—	—	—	—	—	—	—	191
Refrig.	—	—	—	—	—	—	—	—	—	—	—	33.9
Total	11.8	19.8	6.81	83.4	0.15	0.16	14.2	14.3	0.15	3.60	3.75	23,682

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	26,991
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	9,422
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,118
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	48,135
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	26,991
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	9,422
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,118
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	48,135
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	4,480
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,560
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	191
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	1,082
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	516

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	—	—	—	—	—	7,981

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	26,991
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	9,422
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,118
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	48,135
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	26,991
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	9,422
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	1,152

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	6,533
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	3,118
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	—	48,135
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	4,480
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,560
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	191
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	1,082
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	516
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	—	—	—	—	—	7,981

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.07	1.21	1.02	0.01	0.09	—	0.09	0.09	—	0.09	1,449
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443

High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	4,008
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.07	1.21	1.02	0.01	0.09	—	0.09	0.09	—	0.09	1,449
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443
High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	4,008
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	240
Industrial Park	0.02	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	239
High Turnover (Sit Down Restaurant)	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	163

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.07	0.03	0.61	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	664

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.07	1.21	1.02	0.01	0.09	—	0.09	0.09	—	0.09	1,449
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443
High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	4,008
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.13	0.07	1.21	1.02	0.01	0.09	—	0.09	0.09	—	0.09	1,449
Industrial Park	0.13	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443

High Turnover (Sit Down Restaurant)	0.09	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	0.01	0.01	0.11	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	135
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.37	0.18	3.35	2.81	0.02	0.25	—	0.25	0.25	—	0.25	4,008
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	240
Industrial Park	0.02	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	239
High Turnover (Sit Down Restaurant)	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	163
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Strip Mall	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	22.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.07	0.03	0.61	0.51	< 0.005	0.05	—	0.05	0.05	—	0.05	664

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	7.98	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.08	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.35	2.17	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Total	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7

4.3.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	43.7	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	5.91	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	5.17	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	5.17	54.4	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	7.98	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.08	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.35	2.17	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Total	2.35	11.2	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,953
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,086
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	154
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	203
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	6,397
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,953
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	2,086
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	154
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.04
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	203
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	6,397
Annual	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	654
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	345
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	25.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	33.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	1,059

4.4.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,163
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,669
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	123
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.03
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	163
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.03

Total	—	—	—	—	—	—	—	—	—	—	—	5,117
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3,163
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,669
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	123
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.03
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	163
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.03
Total	—	—	—	—	—	—	—	—	—	—	—	5,117
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	524
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	276
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	20.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.01
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	26.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	847

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,486
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,344
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	724
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	346
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4,901
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,486
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	1,344
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	724
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	346
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	4,901
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	412
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	223
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	120
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	57.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	811

4.5.2. 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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	587
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	317
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	171
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00

Strip Mall	—	—	—	—	—	—	—	—	—	—	—	81.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,157
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	587
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	317
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	171
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	81.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1,157
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	97.1
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	52.5
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	28.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	13.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	191

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.09
Total	—	—	—	—	—	—	—	—	—	—	—	205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.09
Total	—	—	—	—	—	—	—	—	—	—	—	205
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.57

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	24.8
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.35
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	33.9

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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.09
Total	—	—	—	—	—	—	—	—	—	—	—	205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.45
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	50.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	1.09

Total	—	—	—	—	—	—	—	—	—	—	—	205
Annual	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.57
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	24.8
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.35
Strip Mall	—	—	—	—	—	—	—	—	—	—	—	0.18
Total	—	—	—	—	—	—	—	—	—	—	—	33.9

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	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	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	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	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	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	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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

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	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	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	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	16,623	16,623	16,623	6,067,395	111,266	111,266	111,266	40,612,090

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	16,623	16,623	16,623	6,067,395	111,266	111,266	111,266	40,612,090

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	3,401,881	1,111,320	138,531

5.10.3. Landscape Equipment

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	9.00	1.00	1,248	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	9.00	4,160	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	4.00	4.00	3,744	1.79	0.94
Leaf Blowers/Vacuums	Electric	9.00	3.00	6,552	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	4.00	0.40	384	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	0.30	384	1.13	0.91
Chainsaws	Gasoline 2-Stroke	6.00	0.20	192	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	4.00	2.00	1,664	6.09	0.58

5.10.4. Landscape Equipment - Mitigated

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	9.00	1.00	1,248	1.13	0.91

Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	9.00	4,160	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	4.00	4.00	3,744	1.79	0.94
Leaf Blowers/Vacuums	Electric	9.00	3.00	6,552	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	4.00	0.40	384	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	0.30	384	1.13	0.91
Chainsaws	Gasoline 2-Stroke	6.00	0.20	192	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	4.00	2.00	1,664	6.09	0.58

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	24,600,012	397	0.0489	0.0069	4,509,216
Industrial Park	8,591,154	397	0.0489	0.0069	4,488,923
High Turnover (Sit Down Restaurant)	1,050,353	397	0.0489	0.0069	3,054,936
Enclosed Parking with Elevator	5,957,088	397	0.0489	0.0069	0.00
Strip Mall	2,843,288	397	0.0489	0.0069	419,241
Parking Lot	838,560	397	0.0489	0.0069	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	24,600,012	397	0.0489	0.0069	4,509,216
Industrial Park	8,591,154	397	0.0489	0.0069	4,488,923

High Turnover (Sit Down Restaurant)	1,050,353	397	0.0489	0.0069	3,054,936
Enclosed Parking with Elevator	5,957,088	397	0.0489	0.0069	0.00
Strip Mall	2,843,288	397	0.0489	0.0069	419,241
Parking Lot	838,560	397	0.0489	0.0069	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	251,982,199	140,246
Industrial Park	132,968,750	140,246
High Turnover (Sit Down Restaurant)	9,788,659	7,012
Enclosed Parking with Elevator	0.00	7,012
Strip Mall	12,962,691	7,012
Parking Lot	0.00	7,012

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	201,585,759	112,197
Industrial Park	106,375,000	112,197
High Turnover (Sit Down Restaurant)	7,830,927	5,610
Enclosed Parking with Elevator	0.00	5,610
Strip Mall	10,370,153	5,610
Parking Lot	0.00	5,610

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	1,319	—
Industrial Park	713	—
High Turnover (Sit Down Restaurant)	384	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	184	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	311	—
Industrial Park	168	—
High Turnover (Sit Down Restaurant)	90.6	—
Enclosed Parking with Elevator	0.00	—
Strip Mall	43.4	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

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

Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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)

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	See Assumptions
Construction: Off-Road Equipment	See Assumptions
Construction: Trips and VMT	See Assumptions
Construction: On-Road Fugitive Dust	See Assumptions
Land Use	See Project Description
Operations: Energy Use	Adjustment for MBS energy usage. All-Electric
Operations: Consumer Products	Adjustment for SCAQMD jurisdiction
Characteristics: Utility Information	SB100 Adjustment. Year 2028

Radford - Operations Phases 1-3 (Cumulative) Custom Report

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5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Radford - Operations Phases 1-3 (Cumulative)
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	23.8
Location	4064 Radford Ave, Studio City, CA 91604, USA
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	3832
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	1,343	1000sqft	30.8	1,343,420	109,569	0.00	—	—

Industrial Park	381	1000sqft	8.74	380,880	0.00	0.00	—	—
Strip Mall	333	1000sqft	7.64	332,760	0.00	0.00	—	—
High Turnover (Sit Down Restaurant)	32.3	1000sqft	0.74	32,250	0.00	0.00	—	—
Enclosed Parking with Elevator	3,880	Space	34.9	993,927	0.00	0.00	—	—
Parking Lot	275	Space	1.03	0.00	100	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Water	W-7	Adopt a Water Conservation Strategy
Waste	S-1/S-2	Implement Waste Reduction Plan

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	96.7	32.2	396	0.80	0.80	73.7	74.5	0.75	18.7	19.5	145,737
Mit.	96.7	32.2	396	0.80	0.80	73.7	74.5	0.75	18.7	19.5	141,066
% Reduced	—	—	—	—	—	—	—	—	—	—	3%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	96.2	34.8	375	0.77	0.80	73.7	74.5	0.75	18.7	19.5	142,319
Mit.	96.2	34.8	375	0.77	0.80	73.7	74.5	0.75	18.7	19.5	137,647
% Reduced	—	—	—	—	—	—	—	—	—	—	3%

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	103	35.4	435	0.78	0.87	72.6	73.4	0.81	18.4	19.2	143,582
Mit.	103	35.4	435	0.78	0.87	72.6	73.4	0.81	18.4	19.2	138,911
% Reduced	—	—	—	—	—	—	—	—	—	—	3%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.8	6.46	79.4	0.14	0.16	13.2	13.4	0.15	3.36	3.51	23,772
Mit.	18.8	6.46	79.4	0.14	0.16	13.2	13.4	0.15	3.36	3.51	22,998
% Reduced	—	—	—	—	—	—	—	—	—	—	3%

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	44.7	28.2	328	0.78	0.47	73.7	74.2	0.44	18.7	19.2	80,798
Area	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	54,263
Water	—	—	—	—	—	—	—	—	—	—	5,676
Waste	—	—	—	—	—	—	—	—	—	—	4,629
Refrig.	—	—	—	—	—	—	—	—	—	—	155
Total	96.7	32.2	396	0.80	0.80	73.7	74.5	0.75	18.7	19.5	145,737
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	44.2	30.8	307	0.74	0.48	73.7	74.2	0.44	18.7	19.2	77,379
Area	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	54,263
Water	—	—	—	—	—	—	—	—	—	—	5,676

Waste	—	—	—	—	—	—	—	—	—	—	4,629
Refrig.	—	—	—	—	—	—	—	—	—	—	155
Total	96.2	34.8	375	0.77	0.80	73.7	74.5	0.75	18.7	19.5	142,319
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	43.9	31.0	314	0.75	0.48	72.6	73.0	0.44	18.4	18.9	78,347
Area	58.9	0.77	118	0.01	0.12	—	0.12	0.09	—	0.09	445
Energy	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	54,331
Water	—	—	—	—	—	—	—	—	—	—	5,676
Waste	—	—	—	—	—	—	—	—	—	—	4,629
Refrig.	—	—	—	—	—	—	—	—	—	—	155
Total	103	35.4	435	0.78	0.87	72.6	73.4	0.81	18.4	19.2	143,582
Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.01	5.66	57.3	0.14	0.09	13.2	13.3	0.08	3.36	3.45	12,971
Area	10.7	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Energy	0.04	0.66	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	8,995
Water	—	—	—	—	—	—	—	—	—	—	940
Waste	—	—	—	—	—	—	—	—	—	—	766
Refrig.	—	—	—	—	—	—	—	—	—	—	25.6
Total	18.8	6.46	79.4	0.14	0.16	13.2	13.4	0.15	3.36	3.51	23,772

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	44.7	28.2	328	0.78	0.47	73.7	74.2	0.44	18.7	19.2	80,798
Area	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217

Energy	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	54,263
Water	—	—	—	—	—	—	—	—	—	—	4,541
Waste	—	—	—	—	—	—	—	—	—	—	1,092
Refrig.	—	—	—	—	—	—	—	—	—	—	155
Total	96.7	32.2	396	0.80	0.80	73.7	74.5	0.75	18.7	19.5	141,066
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	44.2	30.8	307	0.74	0.48	73.7	74.2	0.44	18.7	19.2	77,379
Area	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Energy	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	54,263
Water	—	—	—	—	—	—	—	—	—	—	4,541
Waste	—	—	—	—	—	—	—	—	—	—	1,092
Refrig.	—	—	—	—	—	—	—	—	—	—	155
Total	96.2	34.8	375	0.77	0.80	73.7	74.5	0.75	18.7	19.5	137,647
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	43.9	31.0	314	0.75	0.48	72.6	73.0	0.44	18.4	18.9	78,347
Area	58.9	0.77	118	0.01	0.12	—	0.12	0.09	—	0.09	445
Energy	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	54,331
Water	—	—	—	—	—	—	—	—	—	—	4,541
Waste	—	—	—	—	—	—	—	—	—	—	1,092
Refrig.	—	—	—	—	—	—	—	—	—	—	155
Total	103	35.4	435	0.78	0.87	72.6	73.4	0.81	18.4	19.2	138,911
Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.01	5.66	57.3	0.14	0.09	13.2	13.3	0.08	3.36	3.45	12,971
Area	10.7	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Energy	0.04	0.66	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	8,995
Water	—	—	—	—	—	—	—	—	—	—	752
Waste	—	—	—	—	—	—	—	—	—	—	181

Refrig.	—	—	—	—	—	—	—	—	—	—	25.6
Total	18.8	6.46	79.4	0.14	0.16	13.2	13.4	0.15	3.36	3.51	22,998

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	31,748
Industrial Park	—	—	—	—	—	—	—	—	—	—	7,421
Strip Mall	—	—	—	—	—	—	—	—	—	—	4,660
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	4,024
Parking Lot	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	49,924

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	31,748
Industrial Park	—	—	—	—	—	—	—	—	—	—	7,421
Strip Mall	—	—	—	—	—	—	—	—	—	—	4,660
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	4,024
Parking Lot	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	49,924
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	5,267
Industrial Park	—	—	—	—	—	—	—	—	—	—	1,229
Strip Mall	—	—	—	—	—	—	—	—	—	—	772
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	191
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	666
Parking Lot	—	—	—	—	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	—	—	—	—	8,277

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	31,748
Industrial Park	—	—	—	—	—	—	—	—	—	—	7,421
Strip Mall	—	—	—	—	—	—	—	—	—	—	4,660
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	4,024
Parking Lot	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	49,924
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	31,748
Industrial Park	—	—	—	—	—	—	—	—	—	—	7,421
Strip Mall	—	—	—	—	—	—	—	—	—	—	4,660
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	1,152
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	4,024
Parking Lot	—	—	—	—	—	—	—	—	—	—	920
Total	—	—	—	—	—	—	—	—	—	—	49,924
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	5,267
Industrial Park	—	—	—	—	—	—	—	—	—	—	1,229

Strip Mall	—	—	—	—	—	—	—	—	—	—	772
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	191
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	666
Parking Lot	—	—	—	—	—	—	—	—	—	—	152
Total	—	—	—	—	—	—	—	—	—	—	8,277

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.08	1.44	1.21	0.01	0.11	—	0.11	0.11	—	0.11	1,728
Industrial Park	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443
Strip Mall	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	187
High Turnover (Sit Down Restaurant)	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	4,339
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.08	1.44	1.21	0.01	0.11	—	0.11	0.11	—	0.11	1,728
Industrial Park	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443

Strip Mall	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	187
High Turnover (Sit Down Restaurant)	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	4,339
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	286
Industrial Park	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	239
Strip Mall	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.9
High Turnover (Sit Down Restaurant)	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	163
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.04	0.66	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	718

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.08	1.44	1.21	0.01	0.11	—	0.11	0.11	—	0.11	1,728
Industrial Park	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443

Strip Mall	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	187
High Turnover (Sit Down Restaurant)	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	4,339
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.08	1.44	1.21	0.01	0.11	—	0.11	0.11	—	0.11	1,728
Industrial Park	0.07	1.21	1.01	0.01	0.09	—	0.09	0.09	—	0.09	1,443
Strip Mall	0.01	0.16	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	187
High Turnover (Sit Down Restaurant)	0.05	0.82	0.69	< 0.005	0.06	—	0.06	0.06	—	0.06	982
Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.20	3.63	3.05	0.02	0.28	—	0.28	0.28	—	0.28	4,339
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.01	0.26	0.22	< 0.005	0.02	—	0.02	0.02	—	0.02	286
Industrial Park	0.01	0.22	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	239
Strip Mall	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	30.9
High Turnover (Sit Down Restaurant)	0.01	0.15	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	163

Enclosed Parking with Elevator	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	0.04	0.66	0.56	< 0.005	0.05	—	0.05	0.05	—	0.05	718

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.5	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.52	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.5	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.52	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	7.57	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	1.01	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.17	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Total	10.7	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7

4.3.2. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.5	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.52	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	41.5	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	5.52	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	4.78	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Total	51.8	0.42	64.8	< 0.005	0.05	—	0.05	0.03	—	0.03	217
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	7.57	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.01	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	2.17	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7
Total	10.7	0.14	21.6	< 0.005	0.02	—	0.02	0.02	—	0.02	73.7

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3,754
Industrial Park	—	—	—	—	—	—	—	—	—	—	1,382
Strip Mall	—	—	—	—	—	—	—	—	—	—	387
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	154
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	5,676
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3,754
Industrial Park	—	—	—	—	—	—	—	—	—	—	1,382
Strip Mall	—	—	—	—	—	—	—	—	—	—	387
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	154

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	5,676
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	622
Industrial Park	—	—	—	—	—	—	—	—	—	—	229
Strip Mall	—	—	—	—	—	—	—	—	—	—	64.0
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	25.4
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	940

4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3,003
Industrial Park	—	—	—	—	—	—	—	—	—	—	1,105
Strip Mall	—	—	—	—	—	—	—	—	—	—	309
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	123

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	4,541
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3,003
Industrial Park	—	—	—	—	—	—	—	—	—	—	1,105
Strip Mall	—	—	—	—	—	—	—	—	—	—	309
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	123
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	4,541
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	497
Industrial Park	—	—	—	—	—	—	—	—	—	—	183
Strip Mall	—	—	—	—	—	—	—	—	—	—	51.2
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	20.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	752

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	2,356
Industrial Park	—	—	—	—	—	—	—	—	—	—	891
Strip Mall	—	—	—	—	—	—	—	—	—	—	659
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	724
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	4,629
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	2,356
Industrial Park	—	—	—	—	—	—	—	—	—	—	891
Strip Mall	—	—	—	—	—	—	—	—	—	—	659
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	724
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	4,629
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	390
Industrial Park	—	—	—	—	—	—	—	—	—	—	147
Strip Mall	—	—	—	—	—	—	—	—	—	—	109
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	120
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	766

4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	556
Industrial Park	—	—	—	—	—	—	—	—	—	—	210
Strip Mall	—	—	—	—	—	—	—	—	—	—	155
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	171
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	1,092
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	556
Industrial Park	—	—	—	—	—	—	—	—	—	—	210
Strip Mall	—	—	—	—	—	—	—	—	—	—	155
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	171
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	1,092
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	92.0
Industrial Park	—	—	—	—	—	—	—	—	—	—	34.8
Strip Mall	—	—	—	—	—	—	—	—	—	—	25.7
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	28.3
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	181

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3.27
Industrial Park	—	—	—	—	—	—	—	—	—	—	99.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.07
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	50.4
Total	—	—	—	—	—	—	—	—	—	—	155
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3.27
Industrial Park	—	—	—	—	—	—	—	—	—	—	99.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.07
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	50.4
Total	—	—	—	—	—	—	—	—	—	—	155
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	0.54
Industrial Park	—	—	—	—	—	—	—	—	—	—	16.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.34
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	8.35

Total	—	—	—	—	—	—	—	—	—	—	25.6

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3.27
Industrial Park	—	—	—	—	—	—	—	—	—	—	99.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.07
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	50.4
Total	—	—	—	—	—	—	—	—	—	—	155
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	3.27
Industrial Park	—	—	—	—	—	—	—	—	—	—	99.1
Strip Mall	—	—	—	—	—	—	—	—	—	—	2.07
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	50.4
Total	—	—	—	—	—	—	—	—	—	—	155
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	0.54
Industrial Park	—	—	—	—	—	—	—	—	—	—	16.4
Strip Mall	—	—	—	—	—	—	—	—	—	—	0.34

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	8.35
Total	—	—	—	—	—	—	—	—	—	—	25.6

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	15,532	15,532	15,532	5,669,180	103,894	103,894	103,894	37,921,310

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	15,532	15,532	15,532	5,669,180	103,894	103,894	103,894	37,921,310

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	3,202,415	1,052,261	93,956

5.10.3. Landscape Equipment

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

Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	9.00	1.00	1,248	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	9.00	4,160	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	4.00	4.00	3,744	1.79	0.94
Leaf Blowers/Vacuums	Electric	9.00	3.00	6,552	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	4.00	0.40	384	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	0.30	384	1.13	0.91
Chainsaws	Gasoline 2-Stroke	6.00	0.20	192	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	4.00	2.00	1,664	6.09	0.58

5.10.4. Landscape Equipment - Mitigated

Equipment Type	Fuel Type	Number Per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	9.00	1.00	1,248	1.13	0.91
Other Lawn & Garden Equipment	Gasoline 4-Stroke	2.00	9.00	4,160	6.09	0.58
Leaf Blowers/Vacuums	Gasoline 2-Stroke	4.00	4.00	3,744	1.79	0.94
Leaf Blowers/Vacuums	Electric	9.00	3.00	6,552	1.79	0.94
Lawn Mowers	Gasoline 4-Stroke	4.00	0.40	384	3.86	0.36
Trimmers/Edgers/Brush Cutters	Gasoline 2-Stroke	6.00	0.30	384	1.13	0.91
Chainsaws	Gasoline 2-Stroke	6.00	0.20	192	1.86	0.70
Other Lawn & Garden Equipment	Gasoline 4-Stroke	4.00	2.00	1,664	6.09	0.58

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	28,937,317	397	0.0489	0.0069	5,377,385
Industrial Park	6,767,094	397	0.0489	0.0069	4,488,923
Strip Mall	4,249,282	397	0.0489	0.0069	580,556
High Turnover (Sit Down Restaurant)	1,050,385	397	0.0489	0.0069	3,054,936
Enclosed Parking with Elevator	3,669,014	397	0.0489	0.0069	0.00
Parking Lot	838,560	397	0.0489	0.0069	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	28,937,317	397	0.0489	0.0069	5,377,385
Industrial Park	6,767,094	397	0.0489	0.0069	4,488,923
Strip Mall	4,249,282	397	0.0489	0.0069	580,556
High Turnover (Sit Down Restaurant)	1,050,385	397	0.0489	0.0069	3,054,936
Enclosed Parking with Elevator	3,669,014	397	0.0489	0.0069	0.00
Parking Lot	838,560	397	0.0489	0.0069	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	238,771,072	1,536,660

Industrial Park	88,078,500	0.00
Strip Mall	24,648,372	0.00
High Turnover (Sit Down Restaurant)	9,788,962	0.00
Enclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	1,402

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	191,016,857	1,229,328
Industrial Park	70,462,800	0.00
Strip Mall	19,718,698	0.00
High Turnover (Sit Down Restaurant)	7,831,170	0.00
Enclosed Parking with Elevator	0.00	0.00
Parking Lot	0.00	1,402

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	1,249	—
Industrial Park	472	—
Strip Mall	349	—
High Turnover (Sit Down Restaurant)	384	—
Enclosed Parking with Elevator	0.00	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	295	—
Industrial Park	111	—
Strip Mall	82.5	—
High Turnover (Sit Down Restaurant)	90.6	—
Enclosed Parking with Elevator	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0
Strip Mall	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Strip Mall	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Strip Mall	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

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)

8. User Changes to Default Data

Screen	Justification
Characteristics: Utility Information	Carbon Intensity for 2028. SB 100
Operations: Energy Use	All electric except restaurant cooking uses
Land Use	Revised Parking Structure Square Footage
Operations: Consumer Products	AQMD Jurisdiction

Radford Studio Center Project

Draft EIR

Appendix D-4-Threshold Calculations

Radford Studio

Localized Significance Threshold (LST) Evaluation

			LST				
Phasing	**Area (acres)**	**Distance to Receptor (m)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**NOx (lbs/day)**	**98th NOx (lbs/day)**	**CO (lbs/day)**
Construction (20-Year Scenario)							
Construction Phase 1 - (2025-2027)	2.0	25	10	3	103	87	499
Construction Phase 2 - (2030-2033)	8.5	45	50	15	245	205	698
Construction Phase 3 - (2038-2040)	3.5	65	30	10	143	120	898
Construction Phase 4 - (2044-2045)	3.7	120	50	16	156	131	1446
Phase 1-4 Simultaneous (39-Month Scenario)	5.0	25	24	7	168	141	499

The SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to 5 acres. For projects that exceed 5 acres, such as the Project, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a 5 acre area and would over-predict potential localized impacts (i.e., more pollutant emissions occurring within a smaller area, resulting in greater concentrations).

Thresholds are based on a 5-acre site within SRA 7.

Radford

LST Interpolation Calculations

AQMD LST Lookup Table - Source Receptor Area 7

Acreage	Distance	PM10 (lbs/day)	PM2.5 (lbs/day)	NOx (lbs/day)	98th Percentile NOx (lbs/day)	CO (lbs/day)
1	25	4	3	80	67	498
2	25	7	4	114	96	786
5	25	14	8	172	144	1,434
1	50	13	4	81	68	732
2	50	21	6	111	93	1,068
5	50	42	10	165	138	1,872
1	100	26	8	94	79	1,158
2	100	34	10	121	102	1,594
5	100	56	15	176	148	2,599
1	200	54	18	122	102	2,227
2	200	62	21	144	121	2,786
5	200	84	28	194	163	4,119
1	500	136	68	191	160	7,267
2	500	144	73	204	171	7,947
5	500	167	86	242	203	9,848

Phase 1

	Acreage	Distance
1	2.0	25

Interpolation 1 (Distance Fixed)

Distance	Acreage	PM10 (lbs/day)	PM2.5 (lbs/day)	NOx (lbs/day)	98th Percentile NOx (lbs/day)	CO (lbs/day)
25	2.0	7	4	107	90	753
50	2.0	21	6	105	88	1037
100	2.0	34	10	117	98	1547
200	2.0	62	21	142	119	2733

Interpolation 2

Actual Distance (m)						
25		10	3	103	87	499

Phase 2

	Acreage	Distance
2	8.5	45

Interpolation 1 (Distance Fixed)

Distance	Acreage	PM10 (lbs/day)	PM2.5 (lbs/day)	NOx (lbs/day)	98th Percentile NOx (lbs/day)	CO (lbs/day)
25	8.5	23	12	251	211	2247
50	8.5	67	15	237	199	2864
100	8.5	82	21	247	207	3851
200	8.5	110	37	257	215	5765

Interpolation 2

Actual Distance (m)						
45		50	15	245	205	698

Phase 3

	Acreage	Distance
3	3.5	65

Interpolation 1 (Distance Fixed)

Distance	Acreage	PM10 (lbs/day)	PM2.5 (lbs/day)	NOx (lbs/day)	98th Percentile NOx (lbs/day)	CO (lbs/day)
25	3.5	10	6	140	118	1098
50	3.5	31	8	136	114	1458
100	3.5	45	12	147	123	2079
200	3.5	73	24	168	141	3433

Interpolation 2

Actual Distance (m)						
65		30	10	143	120	898

Phase 4

	Acreage	Distance
4	3.7	120

Interpolation 1 (Distance Fixed)

Distance	Acreage	PM10 (lbs/day)	PM2.5 (lbs/day)	NOx (lbs/day)	98th Percentile NOx (lbs/day)	CO (lbs/day)
25	3.7	11	6	145	122	1144
50	3.7	33	8	140	117	1514
100	3.7	46	13	151	127	2150
200	3.7	74	25	172	144	3526

Interpolation 2

Actual Distance (m)						
120		50	16	156	131	1446

All At Once Scenario

	Acreage	Distance
5	5.0	25

Interpolation 1 (Distance Fixed)

Distance	Acreage	PM10 (lbs/day)	PM2.5 (lbs/day)	NOx (lbs/day)	98th Percentile NOx (lbs/day)	CO (lbs/day)
25	5	14	8	174	146	1442
50	5	42	10	166	140	1880
100	5	56	15	177	148	2611
200	5	84	28	195	163	4132

Interpolation 2

Actual Distance (m)						
25		24	7	168	141	499

Radford Studio Center Project

Draft EIR

Appendix D-5-Construction and Operational Emissions Calculations

- Construction Dewatering Emissions
- Operations
  - Emergency Generator
  - Charbroiler
  - Mobility Hub
  - Existing Driveway Traffic Counts
  - Landscaping Equipment
- On-site Truck/Vehicle Activity
- SCAQMD Annual Emissions Report

Radford Studio Center

Dewatering Emissions Calculations

Dewatering Volumes[a]

Area	AERMOD Excavation Area	Total Gallons
1		20,300,000
2 and 3		15,400,000
Total		**35,700,000**

Dewatering Parameters

Treatment System Parameters

Flow Rate (gal/day)[a]	79,000	24 hrs/day operation
Flow Rate (L/day)	299,047	
Emission Factor (Release Factor)[b]	1%	
Total Dewatering Volume (gal.)[c]	35,700,000	
Total Dewatering (L)[c]	135,139,137	For Annual Emissions

VOC Calculations

Groundwater Concentrations (ug/L)[d]	Max Detected (ug/L)	Average Detected (ug/L)	Max Daily Emissions (lbs)
Trichloroethene (TCE)	14	14	0.0001
Total VOC			**0.0001**

[a] Dewatering Simulation and Analysis for Excavation and Underground Construction. Geosyntec Consultants, March 13, 2024

[b] Dewatering system would use Granular Activated Carbon (GAC) which could remove up to 99.9% of VOCs. Conservatively assumed 99% removal efficiency

[c] Total dewatering volume rounded up. Assumed for annual emissions calculations

[d] Memo Estimated Volume of Impacted Soil and Constituents of Potential Concern at Radford Studio Center. Geosyntec Memo, November 17, 2023.

South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

StatusUpdate

Facility ID	101520
Facility Shutdown Date	N/A
Change of Ownership Date	N/A
Change in Equipment Location Date	N/A
Emissions are zero for this year's report, or emissions reduced by 50%	N/A
Exemption Request	N/A
Use of alternative Calculation methodology	N/A
Other	N/A
Refund Request	N/A
Data is Confidential	NO

South Coast AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Internal Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES19		311163	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.022000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.83		10.32	0.00	2.24	0.74
ES20		312353	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.001000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.04		0.47	0.00	0.10	0.03
ES21		371722	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.035000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	1.31		16.42	0.01	3.57	1.17
ES22		407432	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.009000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.34		4.22	0.00	0.92	0.30
ES23		450092	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.970000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	36.38		454.93	0.20	98.94	32.50
ES24		450093	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.970000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	36.38		454.93	0.20	98.94	32.50
ES25		583770	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.112000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	4.20		52.53	0.02	11.42	3.75
ES26		587808	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.112000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	4.20		52.53	0.02	11.42	3.75

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES27		589750	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.808000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	30.30		378.95	0.17	82.42	27.07
ES28		623374	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2 (Diesel)	0.254000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	9.53		119.13	0.05	25.91	8.51
							Total Emissions		lbs	123.49		1,544.42	0.69	335.89	110.32
							Total Emissions		tons	0.06	0.00	0.77	0.00	0.17	0.06

South Coast AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Spray Coating/Spray Booth Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES16		215663	P1	Spray Booth	Coating : Wood Products Coatings : HVLP Application : Multi-Colored Coatings	Water Based Paint	10.830000	gal	EF	lbs/ gal						0.036800
									Emissions	lbs						0.40
ES17		215664	P1	Spray Booth	Coating : Wood Products Coatings : HVLP Application : Multi-Colored Coatings	Water Based Paint	4.850000	gal	EF	lbs/ gal						0.036800
									Emissions	lbs						0.18
ES18		226551	P1	Open Spray	Coating : Wood Products Coatings : HVLP Application : Multi-Colored Coatings	Water Based Paint	6.000000	gal	EF	lbs/ gal						0.036800
									Emissions	lbs						0.22

Total Emissions	lbs						0.80
Total Emissions	tons	0.00	0.00	0.00	0.00	0.00	0.00

South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Criteria Pollutants Permitted Emissions Summary (Excluding PERP)

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Combustion	0.06	0.00	0.77	0.00	0.00	0.00	0.17	0.06
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Permitted Emissions	**0.06**	**0.00**	**0.77**	**0.00**	**0.00**	**0.00**	**0.17**	**0.06**

South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Criteria Pollutants Non-Permitted Emissions Summary (Excluding PERP)

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Non-Permitted Emissions	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Toxic Air Contaminants (TAC) / Ozone Depleting Compounds (ODC) Emissions and Fees Summary

For detailed TAC Records please see
related “AER TAC Report” Excel file

South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Other Toxic Air Contaminants (TAC) Emissions Summary Applicable to AB2588 Facility

For detailed TAC Records please see
related “AER TAC Report” Excel file

South Coast AQMD

Annual Emission Report

Reporting Year: **2022**

Print Date: **04/14/2023**

Facility Id: **101520**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Total Emissions and Fees

Submittal Date: No later than May 01 2023	Total Permitted Emissions (tons)	Total Non-Permitted Emissions (tons)	Total RECLAIM Emissions (tons)	Total Emission (tons)	Total Emissions/ Subject To Fee (tons)	Emissions Fees Due
Organic Gasses	0.06	0.00		0.06	0.00	$0.00
Specific Organics	0.00	0.00		0.00	0.00	$0.00
Nitrogen Oxides	0.77	0.00	0.00	0.77	0.00	$0.00
Sulfur Oxides	0.00	0.00	0.00	0.00	0.00	$0.00
Carbon Monoxide	0.17	0.00		0.17	0.00	$0.00
Particulate Matter	0.06	0.00		0.06	0.00	$0.00
1. TOTAL EMISSION FEES FOR ALL CRITERIA POLLUTANTS						$0.00
2. TOXIC AIR CONTAMINANTS/ OZONE DEPLETER FEES (Total amount from Form TACS or DC)						$4,365.04

TAC Fees Breakdown	
Facility Flat Fee:	$78.03
CPWE Emission Fees:	$1210.00
Ammonia & Depleting Compounds (ODC) Fees:	$0.00
Per Device Fees (total devices with fees 9):	$3077.01
	$4365.04

3. TOTAL FEES DUE	$4,365.04
4. INSTALLMENTS PAID FOR 2022 - (if any) -- All Criteria Pollutants	$0.00
5. INSTALLMENTS PAID FOR 2022 - (if any) -- Toxic Air Contaminants/Ozone Depleters	$0.00
6. BALANCE DUE (Line 3 - Line 4 - Line 5)	$4,365.04
7. LATE PAYMENT SURCHARGE	$0.00
8. AMOUNT DUE	**$4,365.04**

South Coast AQMD

Annual Emission Report

Reporting Year: **2022**

Facility Id: **101520**

Print Date: **04/14/2023**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

Electronic Certification Sheet

Information

NAICS code:	521110	
AB2588 Filing Period:	No	Brief Description of Operation
RECLAIM:	No	
Facility Operating Status:	Operating	
Classified As Small Business:	No	
Business Operating Hours		
Hours/Day;	24	
Days/Week:	7	
Weeks/Year:	52	

Equipment Location Address

Facility Name:
RADFORD STUDIO CENTER, INC.
4024 RADFORD AVE
STUDIO CITY, CA 91604 2190

Mailing Information

Facility Name:
RADFORD STUDIO CENTER, INC.
4024 RADFORD AVE
STUDIO CITY, CA 91604 2190

Contact Information

Name:	David Mo	Phone:	818 821-9859
Title:	EHS Director	Fax:	
E-mail:	dmo@radfordsc.com		

Preparer Information

Name:	David Mo	Phone:	818 821-9859
Title:	EHS Director	Fax:	
E-mail:	dmo@radfordsc.com		

Authorized Person Information

Name:	David Mo	Phone:	818 821-9859
Title:	EHS Director	Fax:	
E-mail:	dmo@radfordsc.com		

I declare under penalty of perjury that the data submitted truly represents throughput and emissions for this reporting period, and that the emission factors represent the best available data for my company in the calculation of annual emission figures.

[x] I acknowledge that I have read the South Coast AQMD Certification Statement.*

[x] I agree on the responsibility for this AER Report Submission in accordance with Certification Statement.*

South Coast

AQMD

Annual Emission Report

Reporting Year: **2022**

Facility Id: **101520**

Print Date: **04/14/2023**

Facility Name **RADFORD STUDIO CENTER, INC.**

Facility Type: **Entertainment**

AER Submittal Confirmation

Thank you for submitting your Annual Emissions Report for Facility ID: 101520.

Please print the AER Payment Voucher and include the check for emission fees due if applicable and mail them to the SCAQMD.

AER Payment Voucher and check are first received and processed by Bank of America for check deposits, return receipts for certified mails will be stamped by Bank of America rather than AQMD. Please mail the required AER Payment Voucher and check to the following address:

South Coast Air Quality Management District
Annual Emission Reporting Program
File No. 54493
Los Angeles, CA 90074-4493

* To avoid late payment surcharges, all mails must be postmarked by the Post Office on or before May 01, 2023

NOTE: For any overnight delivery, example FedEx, please use the following address:

Bank of America Lockbox Services
Lockbox LAC-054493
2706 Media Center Drive
Los Angeles, CA. 90065

If you wish to use a messenger (or hand deliver), the package should be delivered to the cashier's booth at AQMD Headquarters at the address listed below in Diamond Bar on or before 5:00 p.m. May 01, 2023
Please note that AQMD is closed on Mondays.

South Coast Air Quality Management District
ATTN: Cash Management
Annual Emission Reporting Program
21865 Copley Drive
Diamond Bar, CA 91765-4178

Radford Studio Center

Emergency Generator Calculations

Existing

					VOC	NOx	SOx	CO	PM	PM (Rule 1470)
				Emission Factors (lbs/Mgal)[1] ----->	3.75E+01	4.69E+02	2.10E-01	1.02E+02	3.35E+01	0.86296
Source Name	**Fuel Type**	**Annual Fuel Usage (gal.)**	**Duration per Test (min)[2]**	**Gallons per Hour[3]**	**Emissions (lbs/day)**					
North Lot	Diesel	22	15	12	0.1	1.4	0.0	0.3	0.1	
Admin#2	Diesel	1	15	15	0.1	1.8	0.0	0.4	0.1	
Medical Dept.	Diesel	35	15	12	0.1	1.4	0.0	0.3	0.1	
Sater Structure	Diesel	9	15	12	0.1	1.4	0.0	0.3	0.1	
Broadcast Center #1	Diesel	970	15	87	0.8	10.2	0.0	2.2	0.7	
Broadcast Center #2	Diesel	970	15	87	0.8	10.2	0.0	2.2	0.7	
Lagoon Building	Diesel	112	15	16	0.1	1.8	0.0	0.4	0.1	
Admin #1	Diesel	808	15	72	0.7	8.4	0.0	1.8	0.6	
ET Bldg.	Diesel	254	15	25	0.2	2.9	0.0	0.6	0.2	
Norvet	Diesel	24	15	11	0.1	1.3	0.0	0.3	0.1	
AV-1 Head End	Diesel	0	15	11	0.1	1.3	0.0	0.3	0.1	
Emergency	Diesel	14	15	2	0.0	0.2	0.0	0.1	0.0	
Max					**0.8**	**10.2**	**0.0**	**2.2**	**0.7**	

Annual Average

		lbs/year					
	Annual Fuel Usage (gal.)	**VOC**	**NOx**	**SOx**	**CO**	**PM**
	22	0.8	10.3	0.0	2.2	0.7370
	1	0.0	0.5	0.0	0.1	0.0335
	35	1.3	16.4	0.0	3.6	1.1725
	9	0.3	4.2	0.0	0.9	0.3015
	970	36.4	454.9	0.2	98.9	32.4950
	970	36.4	454.9	0.2	98.9	32.4950
	112	4.2	52.5	0.0	11.4	3.7520
	808	30.3	379.0	0.2	82.4	27.0680
	254	9.5	119.1	0.1	25.9	8.5090
	24	0.9	11.0	0.0	2.4	0.7886
	0	0.0	0.0	0.0	0.0	0.0000
	14	0.5	6.8	0.0	1.5	0.4842
Average Daily (lbs/day)		**0.3**	**4.1**	**0.0**	**0.9**	**0.2954**

Future Project

					VOC	NOx	SOx	CO	PM
				(New Engines) Emission Factors (lbs/Mgal)[4,5] ----->	6.04E+00	2.16E+01	2.11E-01	1.12E+02	8.63E-01
Source Name	**Fuel Type**	**Annual Fuel Usage (gal.)**	**Duration per Test (min)**	**Gallons per Hour[3,6]**	Emissions (lbs/day)				
North Lot	Diesel	22	15	12	0.1	1.4	0.0	0.3	0.1
Admin#2	Diesel	1	15	15	0.1	1.8	0.0	0.4	0.1
Sater Structure	Diesel	9	15	12	0.1	1.4	0.0	0.3	0.1
Broadcast Center #1	Diesel	970	15	87	0.8	10.2	0.0	2.2	0.7
Broadcast Center #2	Diesel	970	15	87	0.8	10.2	0.0	2.2	0.7
Norvet	Diesel	24	15	11	0.1	1.3	0.0	0.3	0.1
Emergency	Diesel	14	15	2	0.0	0.2	0.0	0.1	0.0
New Generator 1[7]	Diesel	1108	15	142	0.2	0.8	0.0	4.0	0.0
New Generator 2[7]	Diesel	1108	15	142	0.2	0.8	0.0	4.0	0.0
New Generator 3[7]	Diesel	1108	15	142	0.2	0.8	0.0	4.0	0.0
New Generator 4[7]	Diesel	1108	15	142	0.2	0.8	0.0	4.0	0.0
Max					**0.8**	**10.2**	**0.0**	**4.0**	**0.7**
Net Increase					**0.0**	**0.0**	**0.0**	**1.8**	**0.0**

	lbs/year				
Annual Fuel Usage (gal.)	**VOC**	**NOx**	**SOx**	**CO**	**PM**
22	0.8	10.3	0.0	2.2	0.7
1	0.0	0.5	0.0	0.1	0.0
9	0.3	4.2	0.0	0.9	0.3
970	36.4	454.9	0.2	98.9	32.5
970	36.4	454.9	0.2	98.9	32.5
24	0.9	11.0	0.0	2.4	0.8
14	0.5	6.8	0.0	1.5	0.5
1108	6.7	23.9	0.2	124.3	1.0
1108	6.7	23.9	0.2	124.3	1.0
1108	6.7	23.9	0.2	124.3	1.0
1108	6.7	23.9	0.2	124.3	1.0
Average Daily (lbs/day)	**0.3**	**2.8**	**0.0**	**1.9**	**0.2**
Net Increase	**(0.1)**	**(1.3)**	**0.0**	**1.0**	**(0.1)**

[1] AQMD Annual Emission Report Default Emission Factors

[2] Based on existing emergency generator requirements of 15 minutes per test.

[3] Based on manufacturer specifications for each generator

[4] Assumes new generators comply with EPA Tier 4 emission standards and AQMD Rule 1470 which requires PM emissions to be no more than 0.02 g/hp-hr.

[5] Conversion from g/hp-hr to lbs/Mgal, EF lbs/Mgal = EF g/hp-hr x 43.148

https://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/guidelines-for-calculating-emissions-from-internal-combustion-engines.pdf?sfvrsn=6

[6] Fuel Usage based on a 2,000 kw generator - https://www.generatorsource.com/Diesel_Fuel_Consumption.aspx

Radford Studio Center

Existing Emergency Generator Hour Logs

Year	**2023**			**2022**		
ES Name	Start Hours	Stop Hours	**Total**	Start Hours	Stop Hours	**Total**
North Lot	77	92.6	**15.6**	72.5	77	**4.5**
Admin#2	56	65	**9.0**	43.7	56	**12.3**
Medical Dept.	315.8	323.9	**8.1**	301.7	315.8	**14.1**
Sater Structure	98.6	107.9	**9.3**	92.8	98.6	**5.8**
Lagoon Building	150.1	166.3	**16.2**	127.2	149.4	**22.2**
Admin #1	328.1	328.3	**0.2**			**0.0**
ET Bldg.	39.26	47.49	**8.2**	25.52	39.26	**13.7**
Norvet	172.7	174.9	**2.2**	165.9	170.1	**4.2**
Emergency	77.5	84.8	**7.3**			**0.0**
AV-1 Head End	118.7	131.8	**13.1**	104.8	118.7	**13.9**
Stage 18	0	1.7	**1.7**	0	1.7	**1.7**
Telecom	0	1.5	**1.5**	0	1.3	**1.3**
Average			**7.7**			**7.8**

Radford Studio Center

Charbroiler Emissions Calculations - Restaurant / Commissary

CHARBROILER

Existing	**Peak Daily**	**Average Daily**	
# of Restaurants Equipped with Charbroiler	**5**	5	
# of Restaurants Equipped with Griddle	**5**	5	
Hours of Operation per Day On-Site	**8**	8	
Days per year		260	
Emissions Control Factor (%)	**85%**		Based on SCAQMD Rule 1138

		SCAQMD Rule 1138 - Appendix I		Emissions Max Daily				Emissions Annual				Emissions Average Daily		
Emission Factors	Quantity per Hour per Restaurant(lbs)	PM (lb/1,000 lb)	ROG (lb/1,000 lb)	PM (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)	PM (lbs/year)	PM10 (lbs/year)	PM2.5 (lbs/year)	ROG (lbs/year)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)
Under-Fired Broiler														
25% Fat Hamburger	3.75	32.65	3.94	4.9	3.4	2.0	0.6	1273.4	891.3	509.3	153.7	3.4	2.0	0.6
Chicken	5.625	10.48	1.82	2.4	1.7	0.9	0.4	613.1	429.2	245.2	106.5	1.7	0.9	0.4
Steak (e.g., burrito)	3.75	17.19	0.86	2.6	1.8	1.0	0.13	670.4	469.3	268.2	33.5	1.8	1.0	0.1
Fish	3.75	3.3	0.38	0.5	0.3	0.2	0.06	128.7	90.1	51.5	14.8	0.3	0.2	0.1
Griddle														
24% fat hamburger	7.5	5.08	0.07	1.5	1.1	0.6	0.0	396.2	277.4	158.5	5.5	1.1	0.6	0.0
sk-boneless chicken breast	15	BDL*	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.4	0.0	0.0	0.2
Total				11.9	8.3	4.7	1.2	3081.8	2157.2	1232.7	376.4	8.3	4.7	1.4
Total with Control				**1.8**	**1.2**	**0.7**	**1.2**	3081.8	2157.2	1232.7	376.4	8.3	4.7	1.4

CHARBROILER

Buildout	**Peak Daily**	**Average Daily**
# of Restaurants Equipped with Charbroiler	**10**	10
# of Restaurants Equipped with Griddle	**10**	10
Hours of Operation per Day On-Site	**8**	8
Days per year		260

		SCAQMD Rule 1138 - Appendix I		Emissions Max Daily				Emissions Annual				Emissions Average Daily		
Emission Factors	Quantity per Hour per Restaurant (lbs)	PM (lb/1,000 lb)	ROG (lb/1,000 lb)	PM (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)	PM (lbs/year)	PM10 (lbs/year)	PM2.5 (lbs/year)	ROG (lbs/year)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)
Under-Fired Broiler														
25% Fat Hamburger	3.75	32.65	3.94	9.8	6.9	3.9	1.2	2546.7	1782.7	1018.7	307.3	6.9	3.9	1.2
Chicken	5.625	10.48	1.82	4.7	3.3	1.9	0.8	1226.2	858.3	490.5	212.9	3.3	1.9	0.8
Steak (e.g., burrito)	3.75	17.19	0.86	5.2	3.6	2.1	0.26	1340.8	938.6	536.3	67.1	3.6	2.1	0.3
Fish	3.75	3.3	0.38	1.0	0.7	0.4	0.11	257.4	180.2	103.0	29.6	0.7	0.4	0.1
Griddle														
24% fat hamburger	7.5	5.08	0.07	3.0	2.1	1.2	0.0	792.5	554.7	317.0	10.9	2.1	1.2	0.0
sk-boneless chicken breast	15	BDL*	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	124.8	0.0	0.0	0.5
Total				23.7	16.6	9.5	2.4	6163.6	4314.5	2465.4	752.7	16.6	9.5	2.9
Total with Control				**3.6**	**2.5**	**1.4**	**2.4**	6163.6	4314.5	2465.4	752.7	16.6	9.5	2.9

Charbroiler Summary	**PM (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**ROG (lbs/day)**
Existing				
Food Truck	4.4	3.1	1.8	0.4
Restaurant	1.8	1.2	0.7	1.2
Existing Total	**6.2**	**4.4**	**2.5**	**1.6**
Project				
Food Truck	5.9	4.1	2.4	0.6
Restaurant	3.6	2.5	1.4	2.4
Project Total	**9.5**	**6.6**	**3.8**	**3.0**
Incremental Increase	**3.3**	**2.3**	**1.3**	**1.3**

Radford Studio Center

Charbroiler Emissions Calculations - Food Trucks

CHARBROILER

Existing	**Peak Daily**	**Average Daily**
# of Food Trucks Not Equipped with Cooking Eq		
# of Food Trucks Equipped with Charbroiler	3	2
# of Food Trucks Equipped with Griddle	3	2
Hours of Operation per Day On-Site	5	5
Days per year		260

		SCAQMD Rule 1138 - Appendix I		Emissions Max Daily				Emissions Annual				Emissions Average Daily		
Emission Factors	Quantity per Hour per truck (lbs)	PM (lb/1,000 lb)	ROG (lb/1,000 lb)	PM (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)	PM (lbs/year)	PM10 (lbs/year)	PM2.5 (lbs/year)	ROG (lbs/year)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)
Under-Fired Broiler														
25% Fat Hamburger	3.75	32.65	3.94	1.8	1.3	0.7	0.2	318.3	222.8	127.3	38.4	0.9	0.5	0.1
Chicken	5.625	10.48	1.82	0.9	0.6	0.4	0.2	153.3	107.3	61.3	26.6	0.4	0.2	0.1
Steak (e.g., burrito)	3.75	17.19	0.86	1.0	0.7	0.4	0.05	167.6	117.3	67.0	8.4	0.5	0.3	0.0
Fish	3.75	3.3	0.38	0.2	0.1	0.1	0.02	32.2	22.5	12.9	3.7	0.1	0.0	0.0
Griddle														
24% fat hamburger	7.5	5.08	0.07	0.6	0.4	0.2	0.0	99.1	69.3	39.6	1.4	0.3	0.2	0.0
sk-boneless chicken breast	15	BDL*	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.6	0.0	0.0	0.1
Total				4.4	3.1	1.8	0.4	770.4	539.3	308.2	94.1	2.1	1.2	0.4

CHARBROILER

Buildout	**Peak Daily**	**Average Daily**
# of Food Trucks Not Equipped with Cooking Eq	4	3
# of Food Trucks Equipped with Charbroiler	4	3
# of Food Trucks Equipped with Griddle	4	3
Hours of Operation per Day On-Site	5	5
Days per year		260

		SCAQMD Rule 1138 - Appendix I		Emissions Max Daily				Emissions Annual				Emissions Average Daily		
Emission Factors	Quantity per Hour per truck (lbs)	PM (lb/1,000 lb)	ROG (lb/1,000 lb)	PM (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)	PM (lbs/year)	PM10 (lbs/year)	PM2.5 (lbs/year)	ROG (lbs/year)	PM10 (lbs/day)	PM2.5 (lbs/day)	ROG (lbs/day)
Under-Fired Broiler														
25% Fat Hamburger	3.75	32.65	3.94	2.4	1.7	1.0	0.3	477.5	334.3	191.0	57.6	1.3	0.7	0.2
Chicken	5.625	10.48	1.82	1.2	0.8	0.5	0.2	229.9	160.9	92.0	39.9	0.6	0.4	0.2
Steak (e.g., burrito)	3.75	17.19	0.86	1.3	0.9	0.5	0.06	251.4	176.0	100.6	12.6	0.7	0.4	0.0
Fish	3.75	3.3	0.38	0.2	0.2	0.1	0.03	48.3	33.8	19.3	5.6	0.1	0.1	0.0
Griddle														
24% fat hamburger	7.5	5.08	0.07	0.8	0.5	0.3	0.0	148.6	104.0	59.4	2.0	0.4	0.2	0.0
sk-boneless chicken breast	15	BDL*	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.4	0.0	0.0	0.1
Total				5.9	4.1	2.4	0.6	1155.7	809.0	462.3	141.1	3.1	1.8	0.5

Radford Studios

Mobility Hub and On-site Vehicle Trips

VMT Calculator Outputs[1]	
Existing Trips	7,783
Project Trips	17,228

Diesel Vs. Non-Diesel Fleet Split[2]

Truck Type	Total Trips	Non Diesel	Diesel	Non-Diesel (%)	Diesel (%)
HHDT (semis)	36	0	36	0%	100%
Light Heavy 5-ton (T5)	43	32	12	73%	27%
Medium Heavy 10-ton (T6&7)	87	19	68	21%	79%
Total Truck Trips	166	52	114		

Existing Trips				
Category	**Split[3]**	**Existing Trips**	**Non Diesel**	**Diesel**
Pass Veh	95.20%	7,409		
Bus	0.10%	8		
Lt Truck	4.10%	319	234	85
Med Truck	0.40%	31	7	24
Hv Truck	0.20%	16	0	16
Total	100.00%	7,783		

Future Trips				
Category	Split	**Future (Project) Trips[4]**	**Non Diesel**	**Diesel**
Pass Veh	95.20%	16,401		
Bus	0.10%	17		
Lt Truck	4.10%	706	518	189
Med Truck	0.40%	69	15	54
Hv Truck	0.20%	34	0	34
Total	100.00%	17,228		

Mobility Hub[5]	
Vehicle Type	**Trips per Day**
Shuttle	104
Uber/Lyft	298
Van	98
Pickup/Dropoff	298

[1] Transportation Assessment for the Radford Studio Center Project Studio City, California. March 2024. Gibson Transportation Consulting

[2] California Air Resources Board EMFAC2021 Model. Los Angeles County, Year 2028

[3] Existing Driveway Counts by Gibson Transportation

[4] Future (Project) trips scaled based on VMT Calculator Outputs and Existing Driveway Counts

[5] Mobility Hub Data by Gibson Transportation

EMFAC2021 Fleet Mix

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

Region	Calendar Year	Vehicle Ca	Fuel	Population		Total	Non-Diese	Diesel
Los Angeles (SC)	2028	LHDT1	Gasoline	123,515	Population	247,983	181,710	66,273
Los Angeles (SC)	2028	LHDT1	Diesel	66,273	Percent Split		73%	27%
Los Angeles (SC)	2028	LHDT1	Electricity	7,079				
Los Angeles (SC)	2028	LHDT2	Gasoline	18,493				
Los Angeles (SC)	2028	LHDT2	Diesel	30,780				
Los Angeles (SC)	2028	LHDT2	Electricity	1,843				
Los Angeles (SC)	2028	MHDT	Gasoline	13,309	Population	79,731	17,122	62,608
Los Angeles (SC)	2028	MHDT	Diesel	62,608	Percent Split		21%	79%
Los Angeles (SC)	2028	MHDT	Electricity	2,743				
Los Angeles (SC)	2028	MHDT	Natural Gas	1,070				

Radford Studios

Mobile Emissions Calculations - Existing and Pro

Project - 2026

Truck Type	Total Deliverie	Non Diese	Diesel
HHDT (semis)	17	0	17
Light Heavy 5-ton (T5)	353	259	94
Medium Heavy 10-ton (T6&7)	34	7	27
Total Truck Trips	405	266	139

Distance Travelled On-site (m 0.5 Average Distance

Diesel Emissions - Year 2028

Emission Factor - Diesel (g/m	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.1	0.7	7.8	0.0	0.0	0.0
Light Heavy 5-ton (T5)	0.2	0.6	1.0	0.0	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.1	0.3	2.3	0.0	0.0	0.0

Diesel Emissions (lbs/da	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.0	0.0	0.3	4.5E-04	0.0	0.0
Light Heavy 5-ton (T5)	0.0	0.1	0.2	9.0E-03	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.0	0.0	0.1	1.2E-03	0.0	0.0
Total	**5.8E-02**	1.7E-01	6.3E-01	1.1E-02	1.0E-02	4.1E-03

Diesel Emissions (lbs/yea	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	1.1	9.1	108.8	0.2	0.2	0.3
Light Heavy 5-ton (T5)	17.7	45.7	72.7	3.3	3.1	0.8
Medium Heavy 10-ton (T6&7)	2.3	6.3	49.8	0.4	0.4	0.4
Total	21.2	61.1	231.2	**3.9**	3.7	1.5

Gasoline Emissions - Year 2028

Emission Factor - Gasoline (g/m	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)						
Light Heavy 5-ton (T5)	0.1	1.5	0.1	0.0	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.2	1.3	0.4	0.0	0.0	0.0

Gasoline Emissions (lbs/da	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.0	0.0	0.0	0.0	0.0	0.0
Light Heavy 5-ton (T5)	0.0	0.8	0.1	0.0	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.0	0.0	0.0	0.0	0.0	0.0
Total	**4.1E-02**	0.9	0.1	0.0	0.0	0.0

Gasoline Emissions (lbs/yea	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.0	0.0	0.0	0.0	0.0	0.0
Light Heavy 5-ton (T5)	14.0	307.8	27.3	0.5	0.5	2.7
Medium Heavy 10-ton (T6&7)	1.1	8.0	2.3	0.0	0.0	0.2
Total	**15.1**	315.8	29.6	0.5	0.5	2.9

Existing - 202

Truck Type	Total Deliverie	Non Diese	Diesel
HHDT (semis)	8	0	8
Light Heavy 5-ton (T5)	160	117	43
Medium Heavy 10-ton (T6&7)	16	3	12
Total Truck Trips	183	120	63

Distance Travelled On-site (m 0.5

Diesel Emissions - Year 2028

Emission Factor - Diesel (g/m	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.1	0.7	7.8	0.0	0.0	0.0
Light Heavy 5-ton (T5)	0.2	0.6	1.0	0.0	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.1	0.3	2.3	0.0	0.0	0.0

Diesel Emissions (lbs/da	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.0	0.0	0.1	2.0E-04	0.0	0.0
Light Heavy 5-ton (T5)	0.0	0.1	0.1	4.1E-03	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.0	0.0	0.1	5.3E-04	0.0	0.0
Total	**2.6E-02**	7.6E-02	2.9E-01	4.8E-03	4.6E-03	1.9E-03

Diesel Emissions (lbs/yea	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.5	4.1	49.1	0.1	0.1	0.2
Light Heavy 5-ton (T5)	8.0	20.7	32.8	1.5	1.4	0.3
Medium Heavy 10-ton (T6&7)	1.1	2.9	22.5	0.2	0.2	0.2
Total	9.6E+00	2.8E+01	1.0E+02	**1.7E+00**	1.7E+00	6.8E-01

Gasoline Emissions - Year 2028

Emission Factor - Gasoline (g/m	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)						
Light Heavy 5-ton (T5)	0.1	1.5	0.1	0.0	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.2	1.3	0.4	0.0	0.0	0.0

Gasoline Emissions (lbs/da	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.0	0.0	0.0	0.0	0.0	0.0
Light Heavy 5-ton (T5)	0.0	0.4	0.0	0.0	0.0	0.0
Medium Heavy 10-ton (T6&7)	0.0	0.0	0.0	0.0	0.0	0.0
Total	**1.9E-02**	0.4	0.0	0.0	0.0	0.0

Gasoline Emissions (lbs/yea	TOG	CO	NOx	PM10	PM2_5	SOx
HHDT (semis)	0.0	0.0	0.0	0.0	0.0	0.0
Light Heavy 5-ton (T5)	6.3	139.1	12.3	0.2	0.2	1.2
Medium Heavy 10-ton (T6&7)	0.5	3.6	1.0	0.0	0.0	0.1
Total	**6.8**	142.7	13.4	0.2	0.2	1.3

Existing

Idle Emissions - Diesel

Idle Time per Truck (min)	15						
		TOG	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Idle Emission Factors (g/hr		0.38	4.92	3.80	0.00	0.00	0.01
Idle Emissions (lbs/day		**5.85E-02**	7.53E-01	5.81E-01	**2.91E-04**	2.79E-04	1.07E-03
Idle Emissions (lbs/year		**2.14E+01**	2.75E+02	2.12E+02	**1.06E-01**	1.02E-01	3.92E-01

Idle Emissions - Gasoline

Idle Time per Truck (min)	15						
		TOG	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Idle Emission Factors (g/hr		0.03	0.27	0.00	0	0	0.00
Idle Emissions (lbs/day		**1.02E-02**	7.83E-02	6.04E-04	0.00E+00	0.00E+00	2.52E-05
Idle Emissions (lbs/year)		**3.74E+00**	2.86E+01	2.20E-01	0.00E+00	0.00E+00	9.20E-03

Worker Trip

Distance (ft)	500						
Distance (mi)	0.1						
		TOG	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Run Speed	10						
Run Emission Factors (g/m^2)		0.15	2.87	0.19	0.01	0.01	0.01
Run Emission	Trips per Day						
Employee Trips (lbs/day	16,401	**0.52**	9.81	0.65	0.0E+00	0.03	0.03
Employee Trips (lbs/year		**161.29**	3070.15	202.19	0.00	10.18	10.80

Project

Idle Emissions - Diesel

Idle Time per Truck (min)	15						
		TOG	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Idle Emission Factors (g/hr		0.38	4.92	3.80	0.00	0.00	0.01
Idle Emissions (lbs/day		**2.64E-02**	3.40E-01	2.63E-01	**1.32E-04**	1.26E-04	4.85E-04
Idle Emissions (lbs/year		**9.65E+00**	1.24E+02	9.59E+01	**4.81E-02**	4.60E-02	1.77E-01

Idle Emissions - Gasoline

Idle Time per Truck (min)	15						
		TOG	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Idle Emission Factors (g/hr		0.03	0.27	0.00	0.00	0.00	0.00
Idle Emissions (lbs/day		**4.63E-03**	3.54E-02	2.73E-04	0.00E+00	0.00E+00	1.14E-05
Idle Emissions (lbs/year)		**1.69E+00**	1.29E+01	9.95E-02	0.00E+00	0.00E+00	4.16E-03

Worker Trip

Distance (ft)	500						
Distance (mi)	0.1						
		TOG	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Run Speed	10						
Run Emission Factors (g/m^2)		0.15	2.87	0.19	0.01	0.01	0.01
Run Emission	Trips per Day						
Employee Trips (lbs/day	7,409	**0.23**	4.43	0.29	1.6E-02	0.01	0.02
Employee Trips (lbs/year		**72.87**	1386.98	91.34	5.00	4.60	4.88

Mobility Hul							
Trip Parameter	**Daily Trip**						
Shuttle Trip	104						
Uber/Lyft	298						
Pickup/Dropoff (Van/Car Pool	396						
Distance (mi)	0.5						
Run Speed (mph)	10						
Shuttle Idle Time per Trip (mir	15						
Emission Factor		**TOG**	**CO**	**NOx**	**PM10**	**PM2_5**	**SOx**
Van/Car Pool - Travel (g/m		0.15	2.87	0.19	0.01	0.01	0.01
Shuttle - Travel (g/mi		0.24	1.82	0.54	0.00	0.00	0.03
Shuttle - Idle (g/hr		0.03	0.27	0.00	0.00	0.00	0.00
Van/Car Pool Emissior	Trips per Day						
Passenger Travel (lbs/day	694	0.12	2.19	0.14	0.01	0.01	0.01
Passenger Travel (lbs/year		36.04	686	45.17	2.47	2.28	2.41
Shuttle Emission							
Shuttle Travel (lbs/day	104	0.03	0.21	0.06	0.00	0.00	0.00
Shuttle Travel (lbs/year		8.75	65.28	19.22	0.15	0.13	1.10
Shuttle Idle (lbs/day		**0.00**	0.02	0.00	0.00	0.00	0.00
Shuttle Idle (lbs/year		**0.63**	4.79	0.04	0.00	0.00	0.00
Total Travel Emissions (lbs/da		**0.14**	**2.40**	**0.21**	**0.01**	**0.01**	**0.01**
Total Travel Emissions (lbs/yea		**44.78**					

[1] Existing Driveway Counts by Gibson Transportati

[2] California Air Resources Board EMFAC20

Source: Transportation Assessment for the Radford Studio Center Project Studio City, California. March 2024. Gibson Transportation Con

Radford Studios

Operational On-site Mobile Dust Emissi

Project - 2026	
Truck Type	**Total Deliverie**
HHDT (semis)	34
Light Heavy 5-ton (T5)	405
Medium Heavy 10-ton (T6&7)	0
Worker Trips	16401

Existing - 202	
Truck Type	**Total Deliverie**
HHDT (semis)	16
Light Heavy 5-ton (T5)	183
Medium Heavy 10-ton (T6&7)	0
Worker Trips	7409

Mobility Hub[b]	
Trip Parameters	**Daily Trips**
Shuttle Trips	104
Uber/Lyft	298
Pickup/Dropoff/Vanpool	396
Total Mobility Hub Trip	798

Truck On-site Distance (mi[c]	**0.5**		**Truck On-site Distance (mi[c]**	**0.5**	
Truck Daily Onsite VM	810		**Truck Daily Onsite VM**	**366**	
Worker On-site Distance (m[c]	**0.1**		**Worker On-site Distance (m[c]**	**0.1**	
Worker Daily Onsite VM	3280		**Worker Daily Onsite VM**	**1403**	
Mobility Hub On-site Distance (m[c]	**0.5**				
Mobility Hub Onsite VM	798				
Total Daily Onsite VM	4888		**Total Daily Onsite VM**	**1769.1**	
	PM10	**PM2.5**		**PM10**	**PM2.5**
Emission Factor (g/mi[d]	0.297	0.073	**Emission Factor (g/mi[d]**	0.297	0.073
Emissions (lbs/day	**3.2**	**0.8**	**Emissions (lbs/day**	**1.2**	**0.3**
Controlled (Street Sweeper 9%[e]	**2.9**	**0.7**	**Controlled (Street Sweeper 9%)**	**1.1**	**0.3**

Radford Studio Center

Mobile Emissions Calculations - EMFAC Output (HHDT)

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2024, 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

Operational Year **2028**

					Totals	1,528,216.2		0.3	0.0	0.0	1,718.4	0.0	0.0	0.2	0.3	4.8	0.0	0.1	0.0	0.0
					g/mi			0.19	0.01	0.01034	1019.95	0.03	0.02	0.10	0.15	2.87	0.01	0.07	0.02	0.01
Region	**Calendar Year**	**Vehicle Category**	**Model Year**	**Speed**	**Fuel**	**Total VMT**	**CVMT**	**EVMT**	**NOx**	**PM2.5**	**PM10**	**CO2**	**CH4**	**N2O**	**ROG**	**TOG**	**CO**	**SOX**	**NH3**	**PM10_PMBW**	**PM2.5_PMBW**
Los Angeles (SC)	2028	LDA	Aggregate	10	Gasoline	923966.1	923966.1	0	4.9E-02	4.6E-03	5.0E-03	5.0E+02	7.9E-03	6.2E-03	2.9E-02	4.2E-02	1.1E+00	5.0E-03	3.8E-02	7.4E-03	2.6E-03
Los Angeles (SC)	2028	LDA	Aggregate	10	Diesel	1303.4	1303.4	0	1.8E-01	3.4E-02	3.5E-02	4.8E+02	8.9E-03	7.5E-02	1.9E-01	2.2E-01	3.4E+00	4.5E-03	3.1E-03	7.5E-03	2.6E-03
Los Angeles (SC)	2028	LDA	Aggregate	10	Electricity	454875.0	0.0	454875.05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-03	8.2E-04
Los Angeles (SC)	2028	LDA	Aggregate	10	Plug-in Hybric	160856.2	17015.0	143841.13	1.7E-03	4.8E-04	5.2E-04	6.2E+01	4.2E-04	3.0E-04	1.4E-03	2.0E-03	1.3E-01	6.1E-04	4.3E-03	2.4E-03	8.2E-04
Los Angeles (SC)	2028	LDT1	Aggregate	10	Gasoline	81264.1	81264.1	0	1.9E-01	6.8E-03	7.4E-03	6.1E+02	2.4E-02	1.4E-02	1.1E-01	1.6E-01	2.4E+00	6.0E-03	3.9E-02	1.1E-02	3.7E-03
Los Angeles (SC)	2028	LDT1	Aggregate	10	Diesel	4.3	4.3	0	8.6E-01	5.2E-01	5.4E-01	8.1E+02	4.0E-02	1.3E-01	8.6E-01	9.8E-01	4.3E+00	7.7E-03	3.1E-03	1.2E-02	4.2E-03
Los Angeles (SC)	2028	LDT1	Aggregate	10	Electricity	3477.5	0.0	3477.5114	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-03	8.2E-04
Los Angeles (SC)	2028	LDT1	Aggregate	10	Plug-in Hybric	2356.0	215.5	2140.5132	1.4E-03	2.7E-04	3.0E-04	5.4E+01	3.7E-04	2.6E-04	1.2E-03	1.7E-03	1.2E-01	5.3E-04	3.8E-03	2.3E-03	8.2E-04
Los Angeles (SC)	2028	LDT2	Aggregate	10	Gasoline	522986.0	522986.0	0	8.1E-02	4.6E-03	5.0E-03	6.1E+02	1.0E-02	7.8E-03	3.9E-02	5.7E-02	1.3E+00	6.0E-03	4.0E-02	1.0E-02	3.5E-03
Los Angeles (SC)	2028	LDT2	Aggregate	10	Diesel	1849.5	1849.5	0	1.3E-01	8.9E-03	9.3E-03	5.9E+02	9.1E-03	9.4E-02	2.0E-01	2.2E-01	1.9E+00	5.6E-03	3.1E-03	1.0E-02	3.5E-03
Los Angeles (SC)	2028	LDT2	Aggregate	10	Electricity	34485.5	0.0	34485.469	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-03	8.2E-04
Los Angeles (SC)	2028	LDT2	Aggregate	10	Plug-in Hybric	37178.6	3611.9	33566.762	1.5E-03	3.5E-04	3.8E-04	5.7E+01	3.9E-04	2.7E-04	1.2E-03	1.8E-03	1.2E-01	5.6E-04	4.1E-03	2.3E-03	8.2E-04

Gasoline Exhaust Only

TOG	CO	NOx	PM10	PM2_5	SOx	CO2	CH4	N2O
1.5E-01	2.9E+00	1.9E-01	1.0E-02	9.5E-03	1.0E-02	1.0E+03	2.5E-02	1.7E-02

Radford Studio Center

Mobile Emissions Calculations - EMFAC Output (HHDT)

Source: EMFAC2021 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Los Angeles (SC)
Calendar Year: 2024, 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed, kWh/mile for Energy Consumption, gallon/mile for Fuel Consumption. PHEV calculated based on total VMT.

Diesel Emission Factors (g/mi)

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	CVMT	EVMT	TOG	CO	NOx	PM10	PM2_5	SOx	DPM
Los Angeles (SC)	2024	HHDT	Aggregate	10	Diesel	8,542	8,542	0	9.3E-02	7.3E-01	8.3E+00	1.4E-02	1.3E-02	2.7E-02	1.4E-02
Los Angeles (SC)	2024	LHDT1	Aggregate	10	Diesel	5,376	5,376	0	3.0E-01	7.8E-01	1.5E+00	5.7E-02	5.5E-02	9.5E-03	5.7E-02
Los Angeles (SC)	2024	LHDT2	Aggregate	10	Diesel	2,380	2,380	0	3.0E-01	7.6E-01	1.4E+00	5.7E-02	5.4E-02	1.1E-02	5.7E-02
Los Angeles (SC)	2024	MHDT	Aggregate	10	Diesel	11,786	11,786	0	1.9E-01	4.0E-01	2.9E+00	4.0E-02	3.9E-02	1.9E-02	4.0E-02
Los Angeles (SC)	2024	OBUS	Aggregate	10	Diesel	1,002	1,002	0	5.4E-01	1.1E+00	6.2E+00	9.6E-02	9.2E-02	2.3E-02	9.6E-02
Los Angeles (SC)	2028	HHDT	Aggregate	10	Diesel	7,428	7,428	0	8.3E-02	6.6E-01	7.8E+00	1.2E-02	1.1E-02	2.4E-02	1.2E-02
Los Angeles (SC)	2028	LHDT1	Aggregate	10	Diesel	5,570	5,570	0	2.3E-01	5.9E-01	9.5E-01	4.2E-02	4.0E-02	9.3E-03	4.2E-02
Los Angeles (SC)	2028	LHDT2	Aggregate	10	Diesel	2,513	2,513	0	2.4E-01	6.1E-01	9.7E-01	4.4E-02	4.2E-02	1.1E-02	4.4E-02
Los Angeles (SC)	2028	MHDT	Aggregate	10	Diesel	10,800	10,800	0	1.1E-01	2.9E-01	2.3E+00	2.0E-02	1.9E-02	1.8E-02	2.0E-02
Los Angeles (SC)	2028	OBUS	Aggregate	10	Diesel	972	972	0	4.6E-01	9.5E-01	5.6E+00	8.3E-02	7.9E-02	2.2E-02	8.3E-02

Gasoline Emission Factors (g/mi)

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	CVMT	EVMT	TOG	CO	NOx	PM10	PM2_5	SOx	DPM
Los Angeles (SC)	2024	HHDT	Aggregate	10	Gasoline	5.874049	5.874049	0	4.8E+00	8.0E+01	8.3E+00	6.3E-03	5.8E-03	4.1E-02	6.3E-03
Los Angeles (SC)	2024	LHDT1	Aggregate	10	Gasoline	17059.75	17059.75	0	1.4E-01	2.1E+00	2.1E-01	3.1E-03	2.8E-03	1.3E-02	3.1E-03
Los Angeles (SC)	2024	LHDT2	Aggregate	10	Gasoline	2454.446	2454.446	0	1.0E-01	1.6E+00	2.3E-01	2.8E-03	2.6E-03	1.5E-02	2.8E-03
Los Angeles (SC)	2024	MHDT	Aggregate	10	Gasoline	3462.68	3462.68	0	3.4E-01	2.6E+00	6.6E-01	4.3E-03	4.0E-03	3.1E-02	4.3E-03
Los Angeles (SC)	2024	OBUS	Aggregate	10	Gasoline	1020.326	1020.326	0	3.4E-01	2.5E+00	7.1E-01	3.6E-03	3.3E-03	3.2E-02	3.6E-03
Los Angeles (SC)	2028	HHDT	Aggregate	10	Gasoline	3.850979	3.850979	0	3.0E+00	5.6E+01	6.0E+00	5.2E-03	4.7E-03	3.7E-02	5.2E-03
Los Angeles (SC)	2028	LHDT1	Aggregate	10	Gasoline	15579.81	15579.81	0	7.9E-02	1.7E+00	1.3E-01	2.6E-03	2.4E-03	1.2E-02	2.6E-03
Los Angeles (SC)	2028	LHDT2	Aggregate	10	Gasoline	2176.521	2176.521	0	5.5E-02	1.3E+00	1.4E-01	2.3E-03	2.1E-03	1.4E-02	2.3E-03
Los Angeles (SC)	2028	MHDT	Aggregate	10	Gasoline	2846.18	2846.18	0	1.9E-01	1.3E+00	3.8E-01	4.5E-03	4.1E-03	3.0E-02	4.5E-03
Los Angeles (SC)	2028	OBUS	Aggregate	10	Gasoline	795.305	795.305	0	2.4E-01	1.8E+00	5.4E-01	4.1E-03	3.7E-03	3.1E-02	4.1E-03

EMFAC2021 - Project Level (PL) Output
Los Angeles County - South Coast

Construction Year	2028		TOG	CO	NOx	PM10	PM2_5	SOx
		Idle Emissions (g/hr)	0.4	4.9	3.8	0.0	0.0	0.0
		Cold Start (g/start)			0.0			
		Warm Start (g/start)			0.0			

Idle Emission Rates (g/hr)

calendar_year	season_month	sub_area	vehicle_class	fuel	process	speed_time	pollutant	emission_rate
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		CO	4.923751331
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		HC	0.26539867
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		NOx	3.802676529
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		PM	0.001918128
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		PM10	0.00190662
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		PM2_5	0.00182414
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		ROG	0.336100876
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		SOx	0.007018042
2028	Annual	Los Angeles (SC)	HHDT	Dsl	IDLEX		TOG	0.382625263

Start Emission Rates (g/start)

calendar_year	season_month	sub_area	vehicle_class	fuel	process	speed_time	pollutant	emission_rate
2021	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	5	NOx	0.084850293
2021	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	720	NOx	15.3378187
2022	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	5	NOx	0.074689716
2022	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	720	NOx	16.28214019
2023	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	5	NOx	0.057423126
2023	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	720	NOx	18.52191972
2024	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	5	NOx	0.049382658
2024	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	720	NOx	18.54962055
2025	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	5	NOx	0.043126025
2025	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	720	NOx	18.51
2026	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	5	NOx	0.037834491
2026	Annual	Los Angeles (SC)	HHDT	Dsl	STREX	720	NOx	18.43050887

24-Hour Driveway Counts

Tuesday, March 7, 2023 **Total (In and Out)**

No	Street Segment	Vehicle	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	
Gate 1	Radford Avenue south of Los Angeles River	**Pass Veh**	0	0	0	0	0	118	131	173	156	194	101	61	92	91	116	128	166	159	92	88	66	13	0	0	1945	
		Bus																										
		Lt Truck																										
		Med Truck																										
		Hv Truck																										
Gate 2	Radford Avenue north of Ventura Boulevard	**Pass Veh**	23	26	25	41	39	28	61	59	80	89	61	50	58	62	51	53	62	56	49	34	22	22	31	37	1119	99.7%
		Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		Lt Truck	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	3	0.3%
		Med Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		Hv Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Gate 3	Colfax Avenue north of Alley	**Pass Veh**	0	0	0	0	0	63	53	82	104	96	110	75	79	92	113	107	104	90	81	31	18	9	0	0	1307	86.8%
		Bus	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	2	0	0	0	0	0	0	0	6	0.4%
		Lt Truck	0	0	0	0	0	12	7	5	16	19	24	16	11	15	11	15	8	9	0	0	1	0	0	0	169	11.2%
		Med Truck	0	0	0	0	0	1	1	1	5	2	1	2	2	2	0	3	1	0	0	0	0	0	0	0	21	1.4%
		Hv Truck	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.2%

Wednesday, March 8, 2023

No	Street Segment	Vehicle	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	
Gate 1	Radford Avenue south of Los Angeles River	**Pass Veh**	0	0	0	0	0	129	112	120	114	147	92	65	70	106	117	104	103	118	25	8	0	0	0	0	1430	
		Bus																										
		Lt Truck																										
		Med Truck																										
		Hv Truck																										
Gate 2	Radford Avenue north of Ventura Boulevard	**Pass Veh**	10	27	23	26	38	41	31	37	82	70	60	67	80	86	55	48	46	74	53	12	13	14	18	50	1061	99.1%
		Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		Lt Truck	0	0	0	0	0	0	0	0	0	0	1	0	4	0	1	0	1	0	0	0	0	0	0	0	7	0.7%
		Med Truck	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2%
		Hv Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.1%
Gate 3	Colfax Avenue north of Alley	**Pass Veh**	0	0	0	0	2	64	60	61	86	78	64	69	77	104	116	81	100	102	53	16	18	16	0	0	1167	84.5%
		Bus	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0.1%
		Lt Truck	0	0	0	0	0	7	5	15	14	18	23	14	17	11	26	7	13	5	1	1	0	0	0	0	177	12.8%
		Med Truck	0	0	0	0	0	1	2	2	2	1	2	2	1	4	2	3	1	1	0	1	0	0	0	0	25	1.8%
		Hv Truck	0	0	0	0	0	1	0	1	1	0	1	0	2	2	0	1	1	0	0	0	0	0	0	0	10	0.7%

Thursday, March 9, 2023

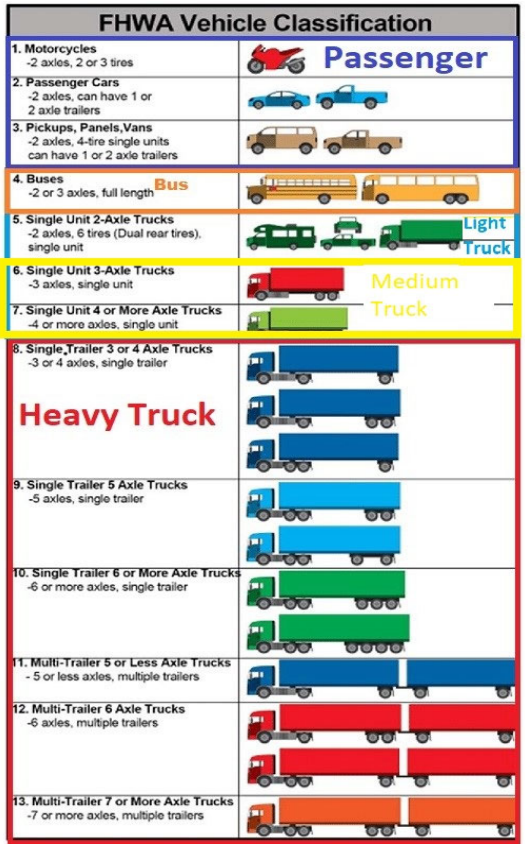
No	Street Segment	Vehicle	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	
Gate 1	Radford Avenue south of Los Angeles River	**Pass Veh**	0	0	0	0	0	126	124	120	209	153	67	73	77	75	212	119	135	107	76	57	60	29	0	0	1819	
		Bus																										
		Lt Truck																										
		Med Truck																										
		Hv Truck																										
Gate 2	Radford Avenue north of Ventura Boulevard	**Pass Veh**	16	27	23	31	42	39	33	47	83	94	56	58	92	59	76	80	42	43	43	23	18	17	49	32	1123	99.7%
		Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		Lt Truck	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3	0.3%
		Med Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		Hv Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Gate 3	Colfax Avenue north of Alley	**Pass Veh**	0	0	0	0	2	77	59	71	111	95	59	73	79	55	116	95	103	81	59	30	32	16	0	0	1213	85.8%
		Bus	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0.2%
		Lt Truck	0	0	0	0	0	5	13	14	20	16	23	16	13	10	13	15	11	8	1	0	0	0	0	0	178	12.6%
		Med Truck	0	0	0	0	0	0	1	2	2	3	0	0	0	0	2	0	1	0	0	0	0	0	0	0	11	0.8%
		Hv Truck	0	0	0	0	0	2	2	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	9	0.6%

Average of Tuesday, Wednesday, Thursday Data

No	Driveways	Vehicle	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total	
Gate 1	Radford Avenue south of Los Angeles River	Pass Veh	0	0	0	0	0	124	122	138	160	165	87	66	80	91	148	117	135	128	64	51	42	14	0	0	1732	
		Bus																										
		Lt Truck																										
		Med Truck																										
		Hv Truck																										
Gate 2	Radford Avenue north of Ventura Boulevard	Pass Veh	16	27	24	33	40	36	42	48	82	84	59	58	77	69	61	60	50	58	48	23	18	18	33	40	1104	99.7%
		Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
		Lt Truck	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0.2%
		Med Truck	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1%
		Hv Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Gate 3	Colfax Avenue north of Alley	Pass Veh	0	0	0	0	1	68	57	71	100	90	78	72	78	84	115	94	102	91	64	26	23	14	0	0	1228	85.8%
		Bus	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	0.2%
		Lt Truck	0	0	0	0	0	8	8	11	17	18	23	15	14	12	17	12	11	7	1	0	0	0	0	0	174	12.2%
		Med Truck	0	0	0	0	0	1	1	2	3	2	1	1	1	2	1	2	1	0	0	0	0	0	0	0	18	1.3%
		Hv Truck	0	0	0	0	0	1	1	1	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	8	0.6%
Average - Total - All Gates		Pass Veh	16	27	24	33	41	228	221	257	342	339	224	196	235	244	324	271	287	277	176	100	83	46	33	40	4064	95.2%
		Bus	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	0.1%
		Lt Truck	0	0	0	0	0	8	8	11	17	18	23	15	15	12	17	12	12	7	1	0	0	0	0	0	176	4.1%
		Med Truck	0	0	0	0	0	1	1	2	3	2	1	2	1	2	1	2	1	0	0	0	0	0	0	0	19	0.4%
		Hv Truck	0	0	0	0	0	1	1	1	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	8	0.2%
		Total	16	27	24	33	41	238	231	272	362	360	249	213	252	259	342	286	301	285	177	100	83	46	33	40	4270	

See Key Below

Source: Gibson Transportation Consulting Inc.



Radford Studio Center

Landscape Equipment Inventory

Landscaping Tools

		Existing			Project		
Tools	**Fuel Type**	**No.**	**hrs/year**	**hrs/day per Equipment**	**No.**	**hrs/year**	**hrs/day per Equipment**
Weed Whacker	Gas	6	832	1	9	1248	1
Sweeper	Gas	1	2080	9	2	4160	9
Blowers	Gas	2	1872	4	4	3744	4
Blowers	Electric	6	4368	3	9	6552	3
Lawn Mowers	Gas	2	192	0.4	4	384	0.4
Hedge Trimmers	Gas	3	192	0.3	6	384	0.3
Chain Saw	Gas	3	96	0.2	6	192	0.2
Steam Cleaner	Gas	2	832	2	4	1664	2

Source: Radford Studio Center. Mechanical and Electrical Services Department

Radford Studio Center Project

Draft EIR

Appendix D-6-City of Los Angeles Air Quality and Health Effects

OCTOBER 2019

PREPARED FOR:
City of Los Angeles,
Department of City Planning

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AIR QUALITY AND HEALTH EFFECTS

SIERRA CLUB V. COUNTY OF FRESNO

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ATTACHMENTS

1 SCAQMD Final 2016 AQMP - Appendix I Health Effects

2 SCAQMD Sierra Club v. County of Fresno Amicus Brief

3 SJVAPCD Sierra Club v. County of Fresno Amicus Brief

4 SMAQMD Friant Ranch Interim Recommendation

INTRODUCTION

In response to the California Supreme Court decision on December 24, 2018, Sierra Club v. County of Fresno (Friant Ranch), this paper provides a supplemental discussion on the potential for identifiable health impacts to result from air pollutants analyzed in City of Los Angeles (City) environmental documents prepared pursuant to the California Environmental Quality Act (CEQA). The discussion focuses on significant impacts identified in City Environmental Impact Reports (EIRs) and the feasibility of directly relating any identified significant adverse air quality impact to likely health consequences. The Supreme Court opinion in Friant Ranch requires projects with significant air quality impacts to "relate the expected adverse air quality impacts to likely health consequences or explain why it is not feasible at the time of drafting to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of the project" (Friant Ranch, page 6). The Friant Ranch decision also states that providing "only a general description of symptoms that are associated with exposure"… "fail[s] to indicate the concentrations at which such pollutants would trigger the identified symptoms…." and "the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin". This paper provides information to the public regarding health consequences associated with exposure to air pollutants and explains why direct correlation of a project's pollutant emissions and anticipated health effects is currently infeasible, as no expert agency has approved a quantitative method to reliably and meaningfully translate mass emission estimates of criteria air pollutants to specific health effects for the scale of projects typically analyzed in City EIRs.

BACKGROUND AND METHODOLOGY

The purpose of CEQA is to inform the public as to the potential for a proposed project to result in one or more significant adverse effects on the environment (including health effects). This includes the potential for a project to result in a considerable contribution towards one or more significant cumulative impacts. CEQA does not require detailed analysis of impacts that are found to be less than significant or less than a considerable contribution to a significant cumulative impact.

In accordance with CEQA requirements and the CEQA review process, the City assesses air quality impacts of proposed local plans and development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The State CEQA Guidelines Section 15064.7 states that the significance criteria established by the applicable air quality management district or air pollution control district, when available, may be relied upon to make determinations of significance. The City is located within the South Coast Air Basin (Air Basin), under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The City defers to threshold guidance established by the SCAQMD and utilizes the SCAQMD's *CEQA Air Quality Handbook* (approved by the AQMD Governing Board in 1993) and subsequent guidance provided on the SCAQMD website[1]. The SCAQMD is currently in the process of developing *an Air Quality Analysis Guidance Handbook* to replace the 1993 Handbook.

In addition, when considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity to land uses that emit toxic air contaminants (TACs). The California Air Resources Board (CARB) has published and adopted the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005), which considers impacts to sensitive receptors from facilities that emit TAC emissions. CARB has also published Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory, a supplement to the handbook that is intended to provide scientifically based strategies to reduce exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice. The SCAQMD has also adopted land use planning guidelines in

[1] SCAQMD, *Air Quality Analysis Guidance,* http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook#. Accessed August 2019.

the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (2005). Together, the documents introduce land use-related policies and strategies that rely on design and distance parameters to minimize emissions and lower potential health risks.

It should also be noted that a host of other regional and local plans also generally address issues of air quality and public health. These include the Southern California Association of Governments (SCAG's) Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS), SCAQMD's Air Quality Management Plan (AQMP), City of Los Angeles' General Plan (including the Framework, Air Quality, Mobility 2035, and Health and Wellness Elements), and City of Los Angeles' Green New Deal (Sustainable pLAn 2019). These contain policies and programs for the protection of the environment and health through improved air quality and serve to provide additional critical guidance for the betterment of public health for the region and City.

CEQA THRESHOLDS OF SIGNIFICANCE

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of an overall endeavor to prevent further deterioration and facilitate improvement in air quality. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings[2]. As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. New findings over time have, in turn, led to the revision and lowering of NAAQS which, in the judgment of the U.S. Environmental Protection Agency (EPA), are necessary to protect public health. Ongoing assessments of the scientific evidence from health studies continue to be an important part of setting and informing revisions to federal and state air quality standards[3].

The six principal pollutants for which national and state criteria and standards have been promulgated, known as "criteria pollutants", and which are most relevant to current air quality planning and regulation in the

[2] U.S. EPA, *NAAQS Table*, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed July 2019.
[3] SCAQMD, *Final 2016 AQMP,* 2017. Appendix I-69. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-i.pdf?sfvrsn=14. Included as Attachment 1 of this memorandum.

Air Basin include: ozone (O_3), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). The State of California has also set standards for sulfates (SO_4), which are a component of particulate matter, and a nuisance odor standard for hydrogen sulfide (H_2S). The Air Basin is currently in non-attainment and exceeds air quality standards for two criteria pollutants: ozone and particulate matter. The Los Angeles County portion of the Air Basin is also designated non-attainment for lead.

Although the SCAQMD's primary mandate is attaining the State and National Ambient Air Quality Standards for criteria pollutants within the district, SCAQMD also has a general responsibility pursuant to the Health and Safety Code §41700 to control emissions of air contaminants and prevent endangerment to public health. Additionally, state law requires the SCAQMD to implement airborne toxic control measures (ATCM) adopted by the California Air Resources Board (CARB), and to implement the Air Toxics "Hot Spots" Act. As a result, the SCAQMD has regulated pollutants other than criteria pollutants such as volatile organic compounds (VOCs), TACs, greenhouse gases, and stratospheric ozone depleting compounds. The SCAQMD has developed a number of rules to control non-criteria pollutants from both new and existing sources. These rules originated through state directives, Clean Air Act (CAA) requirements, or the SCAQMD rulemaking process.

As such, in addition to criteria pollutants, VOCs and TACs are also of concern in the Air Basin. Some VOCs are also classified by the state as TACs. While there are no specific VOC ambient air quality standards, VOCs are a prime component (along with NO_x) of the photochemical processes by which such criteria pollutants as ozone, nitrogen dioxide, and certain fine particles are formed. They are therefore regulated as "precursors" to formation of these criteria pollutants.

TACs is a term used to describe airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health, and include both carcinogens and non-carcinogens. CARB and the California Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. CARB has listed approximately 200 toxic substances, including those identified by the EPA, which are identified on the California Air Toxics Program's TAC List. TACs are also not classified as "criteria" air pollutants. The effects of TACs can be diverse and their health impacts tend to be local rather than regional; consequently ambient air quality standards for these pollutants have not been established, and analysis of health effects is instead based on cancer risk and exposure levels.

To achieve and maintain air quality standards, the SCAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The SCAQMD has established the thresholds based on "scientific and factual data that is contained in the federal and state Clean Air Acts" and recommends "that these thresholds be used by

lead agencies in making a determination of significance."[4] The numerical emission indicators are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health[5]. SCAQMD's thresholds identified below represent the maximum emissions from a plan or project that are not expected to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. By analyzing a plan or project's emissions against the thresholds, EIRs assess whether these emissions directly contribute to any regional or local exceedances of the applicable ambient air quality standards and exposure levels.

Note: In the thresholds referenced below, "emissions" refer to the actual quantity of pollutant measured in pounds per day (ppd). "Concentrations" refer to the amount of pollutant material per volumetric unit of air and are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter (µg/m3).

Construction (Regional and Localized)

Given that construction impacts are temporary and limited to the construction phase, the SCAQMD has established numeric indicators of significance specific to construction activity. Based on the indicators in the SCAQMD *CEQA Air Quality Handbook*, a project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily emissions thresholds:[6]
    - 75 pounds per day for VOC
    - 100 pounds per day for NO_x
    - 550 pounds per day for CO
    - 150 pounds per day for SO_2
    - 150 pounds per day for PM_{10}
    - 55 pounds per day for $PM_{2.}5$

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. The localized significance thresholds are only applicable to NO_x, CO, PM_{10} and $PM_{2.5}$. The SCAQMD has established conservative screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable

[4] SCAQMD, *CEQA Air Quality Handbook 1993,* Page 6-2.
[5] Ibid.
[6] SCAQMD, *Air Quality Significance Thresholds,* March 2015. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed August 2019.

ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the Project is located, (2) the size of the Project Site, and (3) the distance between the Project Site and the nearest sensitive receptor. Otherwise, impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_x and/or CO during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO_2 and/or CO.[7]
- Maximum daily localized emissions of PM_{10} and/or $PM_{2.5}$ during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 10.4 µg/m3 over 24 hours (SCAQMD Rule 403 control requirement).

Operation (Regional and Localized)

Based on the numeric indicators of significant in the SCAQMD *CEQA Air Quality Handbook*, a project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Operational emissions exceed any of the following SCAQMD daily regional numeric indicators:[8]
  - 55 pounds a day for VOC
  - 55 pounds per day for NO_x
  - 550 pounds per day for CO
  - 150 pounds per day for SO_2
  - 150 pounds per day for PM_{10}
  - 55 pounds per day for $PM_{2.5}$

In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. The localized significance thresholds are only applicable to NO_x, CO, PM_{10} and $PM_{2.5}$. The SCAQMD has established conservative screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality

[7] SCAQMD, *Final Localized Significance Threshold Methodology,* 2008, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed August 2019.
[8] SCAQMD, *Air Quality Significance Thresholds,* March 2015. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed August 2019.

standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the Project is located, (2) the size of the Project Site, and (3) the distance between the Project Site and the nearest sensitive receptor. Otherwise, impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_x and/or CO during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO_2 and/or CO[9].
- Maximum daily localized emissions of PM_{10} and/or $PM_{2.5}$ during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 2.5 µg/m3 over 24 hours (SCAQMD Rule 1303 allowable change in concentration).

Toxic Air Contaminants

Based on the criteria set forth by the SCAQMD, the Project would expose sensitive receptors to substantial concentrations of TACs if any of the following would occur[10]:

- The Project emits carcinogenic materials or TACs that exceed the maximum incremental cancer risk of 10 in 1 million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

AVAILABLE MODELS

Current models used in CEQA in air quality analyses are designed to calculate and disclose the mass emissions expected from the construction and operation of a proposed project. The estimated emissions are then compared to significance thresholds, which are in turn, keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. While this serves to protect public health in the overall region, there is currently no methodology to determine the impact of emissions (e.g., pounds per

[9] SCAQMD, *Final Localized Significance Threshold Methodology,* 2008, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds. Accessed August 2019.
[10] SCAQMD, *CEQA Air Quality Handbook,* Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants), 1993; *South Coast Air Quality Management District Air Quality Significance Thresholds,* March 2015, http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed August 2019.

day) on concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas.[11]

Based on SCAQMD guidance, the City utilizes the California Emissions Estimator Model (CalEEMod) to quantify construction and operational air quality impacts from land use projects. Potential TAC impacts are evaluated by conducting a qualitative analysis consistent with CARB and SCAQMD guidance, and may be followed by a more detailed analysis utilizing CARB's Hotspots Analysis and Reporting Program (HARP model) where the project results in a substantial source of TACs or if a project would site sensitive land uses in proximity to TAC sources. However, although CARB and SCAQMD provide guidance for TAC analysis, most land use projects analyzed in City EIRs do not contain substantial on-site sources of TACs, and siting new sensitive uses near existing TAC sources is generally not considered a CEQA impact.

The following table provides a summary of other common available air quality models and identifies their general purposes as well as limitations in quantifying emissions and health effects. Although there are a number of other models available (e.g. models to quantify emissions, dispersion models to determine pollutant concentrations, and regional-scale models which estimate health impacts), this suite of tools is currently not designed to meet the City's need to accurately analyze project-level health effects:

MODEL	SOURCE	PURPOSE	LIMITATIONS
CalEEMod California Emissions Estimator Model	SCAQMD	CalEEMod is a statewide land use **emissions computer model** designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operational from a variety of land use projects.	The model can quantify emissions, but is not able to model concentrations or dispersion of pollutants or related health effects.
AERMOD	USEPA / American Meteorological Society	AERMOD models the **dispersion** of criteria air pollutant emissions over a period of time from discrete emission sources across a defined spatial boundary and can help inform exceedance of pollutant concentration standards. AERMOD provides more refined modeling than AERSCREEN, since it uses actual meteorological data (rather than simulated data) for the vicinity of the project site. *NOTE:* The U.S. EPA has adopted the	AERMOD can estimate pollutant concentrations of NO_x, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, total suspended particulates, lead, and other pollutants. However, AERMOD cannot estimate concentrations of VOCs, O_3 or secondary PM. While AERMOD can estimate concentrations for certain pollutants, no methods have been demonstrated to reliably and meaningfully connect pollutant concentrations to specific health effects.

[11] SMAQMD, *Friant Ranch Interim Recommendation*, 2019. http://www.airquality.org/LandUseTransportation/Documents/FriantInterimRecommendation.pdf. Accessed August 2019. Included as Attachment 4 of this memorandum.

MODEL	SOURCE	PURPOSE	LIMITATIONS
		AERMOD air dispersion model into its list of regulatory approved models in place of the previously used ISCST3 (Industrial Source Complex Short Term) model and CARB recommends AERMOD, instead of ISCST3, for Hot Spots risk assessments.	
AERSCREEN	USEPA	AERSCREEN is a screening version of the AERMOD **dispersion model,** intended to produce concentration estimates that are equal to or greater than the estimates produced by AERMOD with a fully developed set of meteorological and terrain data, but the degree of conservatism will vary depending on the application. This program is useful as a screening Health Risk Assessment (HRA) for minor or temporary sources such as construction-only projects.	As with AERMOD, AERSCREEN can estimate concentrations for certain pollutants; however, AERSCREEN does not connect pollutant concentrations to specific health effects.
BenMAP-CE Environmental Benefits Mapping and Analysis Program - Community Edition	USEPA	BenMAP-CE is a **regional-scale model** that can be used to estimate the resulting **health impacts** from change in ambient $PM_{2.5}$ concentrations for related health endpoints such as premature mortality, hospital admissions, and emergency room visits. The USEPA CMAQ model can be used to predict changes in the ambient air concentration of ozone, the results of which can be used in BenMAP-CE to estimate the resulting health impacts.	The model is used for assessing impacts over large areas and populations and is not intended to be used for individual projects, as it would not provide meaningful or reliable results at the smaller scale.
CalEnviroScreen California Communities Environmental Health Screening Tool	OEHHA & CalEPA	CalEnviroScreen is a **mapping tool** that helps identify California communities that are most affected by many sources of pollution, identified by a data-driven scoring system.	While the tool is useful to identify communities disproportionately burdened by certain pollutants, the tool is not used to track or model dispersal of project emissions.
CALINE-4	Caltrans	CALINE-4 is a **line-source dispersion model** for predicting air pollutant concentrations at receptors near highways and arterial streets, specifically for CO, NO_2, and PM. Caltrans guidance recommends only utilizing the tool for CO hot-spot analysis, and does not recommend using CALINE-4 to analyze any other pollutant.	CALINE-4 is limited to estimating concentrations of CO, NO_2, and PM from line sources such as roadways. CALINE-4 does not have the capability to evaluate concentrations of O_3 or secondary PM, or concentrations from other types of emissions sources (e.g., point, volume, or area sources). CALINE-4 is also not able to connect pollutant concentrations to specific health effects.

MODEL	SOURCE	PURPOSE	LIMITATIONS
CAMx Compressive Air Quality Model	Ramboll & Environ	CAMx is a **grid-based dispersion model** that simulates the chemical interactions and three-dimensional dispersion patterns on a regional, statewide, and national scale.	Since CAMx is designed to model emissions on a regional, statewide, and national scale, it is unsuitable for project-level analysis.
CMAQ Community Multiscale Air Quality Modeling System	USEPA	CMAQ is an atmospheric **dispersion model** consisting of a suite of programs for conducting air quality model simulations. CMAQ combines current knowledge in atmospheric science and air quality modeling, multi-processor computing techniques, and an open-source framework to deliver estimates of ozone, particulates, toxics and acid deposition. The program can be used to predict the concentration and deposition of both criteria pollutants and TACs.	There are limitations on the minimum modeling domain at which the model is still reasonably accurate. (e.g. the EPA recommends nesting a local regional model within a larger regional domain. However, the EPA recognized that expanding to a larger regional domain needs more data, which currently may not be available to the public. In addition, the minimum resolution of the CMAQ model is 1 sq. km., meaning that it would have difficulty in modeling impact areas that are less than 247 acres with meaningful or reliable results.)
EMFAC EMissions FACtor	CARB	EMFAC2017 is used to estimate **emissions** from on-road vehicles in California.	The model can quantify emissions, but is not able to model concentrations or dispersion of pollutants or related health effects.
HARP Hotspots Analysis and Reporting Program	CARB	HARP is a software suite that addresses the programmatic requirements of the Air Toxics "Hot Spots" Program (Assembly Bill 2588) and can perform air **dispersion** runs and **health risk assessments**, as well as can create and manage facility and emissions data. HARP is useful for determining how increases in specific TAC concentrations could affect receptors in terms of the increased cancer risks, chronic hazards, and acute hazards.	The tool is not used for evaluation of criteria air pollutants and related health effects.
OFFROAD	CARB	OFFROAD calculates **emissions** from off-road sources. The OFFROAD model is now being replaced by category specific methods and inventory models that are being developed for specific regulatory support projects.	The model can quantify emissions, but is not able to model concentrations or dispersion of pollutants or related health effects. In addition, the model is not comprehensive and lacks emissions forecasts for certain types of equipment.
Roadway Construction Emissions Model	SMAQMD	The model can be used to assist roadway project proponents with determining the **emission** impacts of their projects.	The Roadway Construction Emissions Model can quantify emissions, but is not able to model concentrations or dispersion of pollutants or related health effects.

As demonstrated above, while a number of models and tools are available to quantify emissions and pollutant concentrations, these models are limited by a number of factors in determining health impacts of individual development and infrastructure projects as well as local plan-level projects. The USEPA currently performs health impact assessments (HIAs) using the CMAQ model for pollutant transport modeling and BENMAP for health impact calculations. However, as described in further detail below, these models are designed to estimate health impacts over a large scale (e.g. city-wide, state-wide). In addition, the CMAQ model requires inputs such as regional sources of pollutants and global meteorological data, which are generally not accessible. In addition to the unsuitability of regional models in providing reliable results for local-level plans or individual projects, other general limitations of the current suite of models include limitations on the ability of certain tools to model concentrations or the dispersion of pollutants for all types of sources, other models only addressing a partial and incomplete range of pollutants and secondary pollutants, and limitations on being able to correlate identified concentrations to related health effects.

As such, neither the SCAQMD, CARB, "nor any air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions".[12]

[12] SMAQMD, *Friant Ranch Interim Recommendation*, 2019. http://www.airquality.org/LandUseTransportation/Documents/FriantInterimRecommendation.pdf. Accessed August 2019. Included as Attachment 4 of this memorandum.

AIR QUALITY AND HEALTH EFFECTS

The following information and analysis of health effects is relevant where a City EIR concludes that regional or localized air pollutant emissions would exceed the SCAQMD's thresholds of significance identified above and such impacts are deemed significant and unavoidable.

Ambient air pollution is a general public health concern, and in particular, Southern California has a long and well-documented history in battling poor air quality. Since the mid-20th century, the greater Los Angeles region has been at the forefront of air pollution science, low-emissions technology development, and innovative air quality regulation. These efforts have led to substantial and noticeable improvements in air quality and public health within the South Coast Air Basin, all during a period of dramatic increases in economic activity, population, and vehicle miles traveled. Despite these successes, the health of the region's residents continues to be seriously affected by the poor air quality that confronts the region.[13] Ambient air pollution continues to be linked to increases in respiratory illness (morbidity) and increases in death rates (mortality).[14]

Air pollution has many effects on the health of both adults and children. Adverse health outcomes linked to air pollution include asthma, cardiovascular effects, premature mortality, respiratory effects, cancer, reproductive effects, neurological effects, and other health outcomes.

The evidence linking these effects to air pollutants is derived from population based (i.e., large-scale) observational and field studies (epidemiological) as well as controlled laboratory studies involving human subjects and animals. There have been an increasing number of studies focusing on the mechanisms (that is, on learning how specific organs, cell types, and biochemicals are involved in the human body's response to air pollution) and specific pollutants responsible for individual effects. Yet the underlying biological pathways for these effects are not always clearly understood.

[13] SCAQMD, *Final 2016 AQMP*, 2017, Page Preface. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed August 2019.
[14] SCAQMD, *Final 2016 AQMP*, 2017, Page Appendix I-1. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed August 2019. Included as Attachment 1 of this memorandum.

Although individuals inhale pollutants as a mixture under ambient conditions, the regulatory framework and the control measures developed are mostly pollutant-specific. Individual pollutants usually differ in their sources, their times and places of occurrence, the kinds of health effects they may cause, and their overall levels of health risk. To meet the air quality standards, comprehensive plans are developed, including the Air Quality Management Plan (AQMP) and Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). These plans examine multiple pollutants, cumulative effects, and transport issues related to attaining healthful air quality in the region. In addition, a host of regulatory standards function to identify and limit exposure of air pollutants and toxic air contaminants.

HEALTH EFFECTS ADDRESSED IN PLANS AND REGULATORY STANDARDS

As previously stated, the NAAQS and CAAQS have been set at levels considered safe to protect public health. These standards are informed by and revised based on evolving scientific evidence of air pollution health effects. The SCAQMD (together with SCAG) has the responsibility for ensuring that national and state ambient air quality standards are achieved and maintained throughout the Air Basin. Failure to comply with these standards puts state and local agencies at risk for penalties such as: lawsuits, fines, a federal takeover of state implementation plans, and a loss of funds from federal agencies such as the Federal Highway Administration and Federal Transit Administration.

Criteria Pollutants

To meet the standards, the SCAQMD has adopted a series of AQMPs, which serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the area into attainment with the standards in a timely manner. The 2016 AQMP includes strategies to ensure that rapidly approaching attainment deadlines for ozone and $PM_{2.5}$ are met and that public health is protected to the maximum extent feasible. The most significant air quality challenge in the Air Basin is to reduce NO_X emissions[15] sufficiently to meet the upcoming ozone standard deadlines, as NO_X plays a critical role in the creation of ozone. The AQMP's strategy to meet the 8-hour ozone standard in 2023 should lead to sufficient NO_X emission reductions to attain the 1-hour

[15] NOx emissions are a precursor to the formation of both ozone and secondary $PM_{2.5}$.

ozone standard by 2022. Since NO_X emissions also lead to the formation of $PM_{2.5}$, the NO_X reductions needed to meet the ozone standards will likewise lead to improvement of $PM_{2.5}$ levels and attainment of $PM_{2.5}$ standards.[16][17]

The SCAQMD's strategy to meet national and state standards distributes the responsibility for emission reductions across federal, state and local levels and industries. The 2016 AQMP is composed of stationary and mobile source emission reductions from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies, and reductions from federal sources, which include aircraft, locomotives and ocean-going vessels. These strategies are to be implemented in partnership with the CARB and U.S. EPA. In addition, SCAG recently approved their 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (2016-2040 RTP/SCS) Plan[18] which includes transportation programs, measures, and strategies generally designed to reduce vehicle miles traveled (VMT), which are contained in the AQMP.

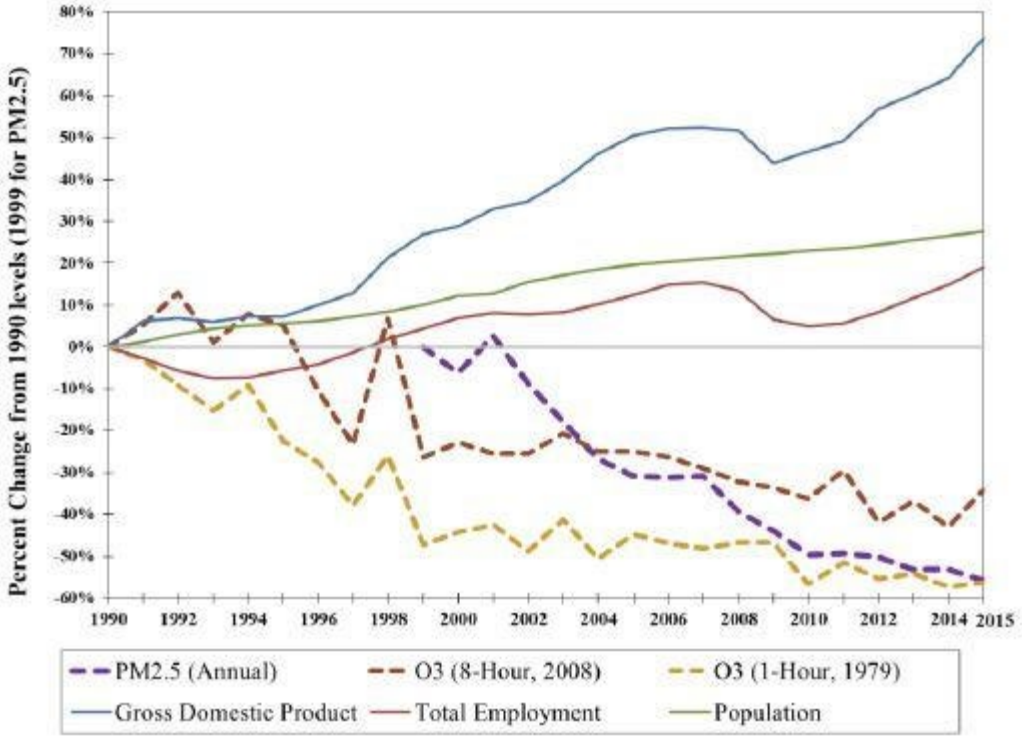
Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The SCAQMD combines its portion of the Plan with those prepared by SCAG.[19] The RTP/SCS and Transportation Control Measures, included as Appendix IV-C of the 2016 AQMP for the Air Basin, are based on SCAG's 2016-2040 RTP/SCS.

The 2016 AQMP forecasts the 2031 emissions inventories "with growth" based on SCAG's 2016-2040 RTP/SCS. The region is projected to see a 12 percent growth in population, 16 percent growth in housing units, 23 percent growth in employment, and 8 percent growth in vehicle miles traveled between 2012 and 2031. Despite this regional growth, air quality has improved substantially over the years, primarily due to the effects of air quality control programs at the local, state and federal levels. Figure 1, provided below, shows the trends since 1990 of the 8-hour ozone levels, the 1-hour ozone levels, and annual average $PM_{2.5}$ concentrations (since 1999), compared to the regional gross domestic product, total employment and population. Human activity in the region has an impact on achieving reductions in emissions. However, the ozone and particulate matter levels continue

[16] Estimates are based on the inventory and modeling results and are relative to the baseline emission levels for each attainment year (see Final 2016 AQMP for detailed discussion).
[17] SCAQMD, *Final 2016 AQMP*, 2017. Page ES-2. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed August 2019.
[18] SCAG, *Final 2016 RTP/SCP*, 2016 http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx. Accessed August 2019.
[19] SCAQMD, *Final 2016 AQMP*, 2017. Page ES-2. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed August 2019.

to trend downward as the economy and population increase, demonstrating that it is possible to maintain a healthy economy while improving public health through air quality improvements.[20]

Figure 1:
Percent Change in Air Quality Along with
Demographic Data for the 4-County Region (1990-2015)



Source: SCAQMD, Figure 1-4 of the Final 2016 AQMP.

Consistency with AQMP and 2016-2040 RTP/SCS Growth Assumptions

As discussed above, the 2016 AQMP incorporates the SCAG 2016–2040 RTP/SCS and updated emission inventory methodologies for various source categories to demonstrate attainment with applicable state and federal standards. With regard to land use, the 2016-2040 RTP/SCS land use control measures (i.e., goals and policies) focus on the reduction of vehicle trips and VMT.

The City's EIRs provide an analysis of a project's consistency with both the AQMP and the 2016-2040 RTP/SCS. The 2016-2040 RTP/SCS is expected to help SCAG reduce VMT, with reductions in per capita transportation emissions of 18 percent by 2035 and 21-percent by 2040. In addition, the 2016-2040 RTP/SCS provides a 2012 Base Year projected daily Total VMT per capita of 21.5 and 18.4 daily Total VMT per capita for the

[20] SCAQMD, *Final 2016 AQMP*, 2017. Page 1-6. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed August 2019.

2040 Plan Year. As the AQMP control strategy is based on projections from local General Plans, projects which are consistent with local General Plans are considered consistent with the growth assumptions of the air quality related regional plans and their emissions are assumed to be accounted for in the AQMP emissions inventory. Projects which include amendments to General or Specific Plans, or are considered significant projects, undergo further scrutiny for AQMP consistency.

Toxic Air Contaminants

In addition, the state's California Air Toxics Program is an established two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or "listed," as a TAC in California. In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of ATCMs, both for mobile and stationary sources. These ATCMs include measures such as limits on heavy-duty diesel motor vehicle idling and emission standards for off-road diesel construction equipment in order to reduce public exposure to diesel PM and other TACs. These actions are also supplemented by the AB 2588 Air Toxics "Hot Spots" program and SB 1731, which require facilities to report their air toxics emissions, assess health risks, notify nearby residents and workers of significant risks if present, and reduce their risk through implementation of a risk management plan. SCAQMD has further adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

City EIRs acknowledge that these plans and regulatory standards have been set at levels considered safe to protect public health and are part of the regulatory environment when considering local plan and project-level impacts.

HEALTH EFFECTS OF CRITERIA POLLUTANTS AND TOXIC AIR CONTAMINANTS

A summary discussion of the health effects due to exposure of pollutants exceeding SCAQMD's significance thresholds is provided in City EIRs and an expanded discussion is provided below (substantially drawn from reviews presented in the SCAQMD's Final 2016 Air Quality Management Plan, Chapter 2 (Air Quality and Health Effects), March 2017). A more detailed discussion of the health effects of these pollutants is provided in Attachment 1 to this memorandum (SCAQMD Final 2016 Air Quality Management Plan, Appendix I: Health Effects)

Ozone (O_3)

Ozone is a gas that is formed when volatile organic compounds (VOCs) and NO_X—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. Ozone is one of the most important air pollutants affecting human health in regions like Southern California. Ozone is a molecule built of three atoms of oxygen linked together in a very energetic combination. When ozone comes into contact with a surface it rapidly releases this extra force in the form of chemical energy. When this happens in biological systems, such as the respiratory tract, this energy can cause damage to sensitive tissues in the upper and lower airways.

The major subgroups of the population considered to be at increased risk from ozone exposure are outdoor exercising individuals including children and people with preexisting respiratory disease(s) such as asthma. The database identifying the former group as being at increased risk to ozone exposure is much stronger and more quantitative than that for the latter group, probably because of a larger number of studies conducted were with healthy individuals. The adverse effects reported with short-term ozone exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of ozone reaching the lungs. Children may be a particularly vulnerable population to air pollution effects because they spend more time outdoors, are generally more active, and have a higher ventilation rate than adults. A number of adverse health effects associated with ambient ozone levels have been identified from laboratory and epidemiological studies. These include increased respiratory symptoms, damage to cells of the respiratory tract, decreases in lung function, increased susceptibility to respiratory infection, and increased risk of hospitalization.

The Children's Health Study, conducted by researchers at the University of Southern California, followed a cohort of children that live in 12 communities in southern California with differing levels of air pollution for several years. A publication from this study found that school absences in fourth graders for respiratory illnesses were associated with ambient ozone levels. An increase of 20 ppb ozone was associated with an 83 percent increase in illness related absence rates.[21] However, it is not recommended to base assumptions of health impacts off of a single example or study. It should also be noted that the study is based on one specific subgroup and may not apply to the general population. Furthermore, the study analyzed changes in regional air quality, and these region-wide changes could not be reasonably attributable to a single project or local plan based on existing science and models.

The number of hospital admissions and emergency room visits for all respiratory causes (infections, respiratory failure, chronic bronchitis, etc.) including asthma show a consistent increase as ambient ozone levels increase in a community. These excess hospital admissions and emergency room visits are observed when hourly ozone concentrations are as low as 0.08 to 0.10 ppm.

Numerous recent studies have found positive associations between increases in ozone levels and excess risk of mortality. These associations persist even when other variables including season and levels of particulate matter are accounted for. This indicates that ozone mortality effects are independent of other pollutants.[22]

Several population-based studies suggest that asthmatics are more adversely affected by ambient ozone levels, as evidenced by increased hospitalizations and emergency room visits. Laboratory studies have attempted to compare the degree of lung function change seen in age and gender-matched healthy individuals versus asthmatics and those with chronic obstructive pulmonary disease. While the degree of change evidenced did not differ significantly, that finding may not accurately reflect the true impact of exposure on these respiration-compromised individuals. Since the respiration-compromised group may have lower lung function to begin with, the same degree of change may represent a substantially greater adverse effect overall.

A publication from the Children's Health Study focused on children and outdoor exercise. In communities with high ozone concentrations, the relative risk of developing asthma in children playing three or more sports was found to be over three times higher than in children playing no sports.[23] These findings indicate that new cases of asthma in children are associated with heavy exercise in communities with high levels of ozone. While

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[21] Gilliland FD, Berhane K, Rappaport EB, Thomas DC, Avol E, Gauderman WJ, London SJ, Margolis HG, McConnell R, Islam KT, Peters JM. *The Effects of Ambient Air Pollution on School Absenteeism Due to Respiratory Illnesses.* Epidemiology, 2001. 12(1):43-54.

[22] Bell ML, McDermott A, Zeger SL, Samet, JM, Dominici, F. *Ozone and Short-Term Mortality in 95 US Urban Communities, 1987-2000.* 2004. JAMA 292:2372-2378.

[23] McConnell R, Berhane K, Gilliland F, London SJ, Islam T, Gauderman WJ, Avol E, Margolis HG, Peters JM. *Asthma in exercising children exposed to ozone: a cohort study.* 2002. Lancet, 359:386-91.

it has long been known that air pollution can exacerbate symptoms in individuals with respiratory disease, this is among the first studies that indicate ozone exposure may be causally linked to asthma.

Some lung function responses (volume and airway resistance changes) observed after a single exposure to ozone exhibit attenuation or a reduction in magnitude with repeated exposures. Although it has been argued that the observed shift in response is evidence of a probable adaptation phenomenon, it appears that while functional changes may exhibit adaptation, biochemical and cellular changes which may be associated with episodic and chronic exposure effects may not exhibit similar adaptation. That is, internal damage to the respiratory system may continue with repeated ozone exposures, even if externally observable effects (chest symptoms and reduced lung function) disappear.

In a laboratory, exposure of human subjects to low levels of ozone causes reversible decrease in lung function as assessed by various measures such as respiratory volumes, airway resistance and reactivity, irritative cough and chest discomfort. Lung function changes have been observed with ozone exposure as low as 0.08 to 0.12 ppm for 6-8 hours under moderate exercising conditions. Similar lung volume changes have also been observed in adults and children under ambient exposure conditions (0.10 - 0.15 ppm). The responses reported are indicative of decreased breathing capacity and are reversible.

In laboratory studies, cellular and biochemical changes associated with respiratory tract inflammation have also been consistently reported in the airway lining after low level exposure to ozone. These changes include an increase in specific cell types and in the concentration of biochemical mediators of inflammation and injury such as cytokines and fibronectin. These inflammatory changes can be observed in healthy adults exposed to ozone in the range of 0.08 to 0.10 ppm.

The susceptibility to ozone observed under ambient conditions could be due to the combination of pollutants that coexist in the atmosphere or ozone may actually sensitize these subgroups to the effects of other pollutants. Some animal studies show results that indicate possible chronic effects including functional and structural changes of the lung. These changes indicate that repeated inflammation associated with ozone exposure over a lifetime may result in sufficient damage to respiratory tissue such that individuals later in life may experience a reduced quality of life in terms of respiratory function and activity level achievable. An autopsy study involving Los Angeles County residents provided supportive evidence of lung tissue damage (structural changes) attributable to air pollution. A study of birth outcomes in southern California found an increased risk for birth defects in the aortic and pulmonary arteries associated with ozone exposure in the second month of pregnancy.[24] This is the first study linking ambient air pollutants to birth defects in humans. Confirmation by further studies is needed. In summary, acute adverse effects associated with ozone exposures have been well

[24] Ritz B, Yu F, Chapa G, Fruin S. *Effect of Air Pollution on Preterm Birth Among Children Born in Southern California between 1989 and 1993.* 2002. Epidemiology, 11(5)502-11.

documented, although the specific causal mechanism is still somewhat unclear. Additional research efforts are required to evaluate the long-term effects of air pollution and to determine the role of ozone in influencing chronic effects.

Particulate Matter (PM_{10} and $PM_{2.5}$)

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids. The U.S. Environmental Protection Agency and the California Air Resources Board have recognized adverse health effects that may be associated with exposure to PM_{10} and $PM_{2.5}$, including:[25] (1) Increased respiratory symptoms, such as the irritation of the airways; (2) Coughing, or difficulty breathing; (3) Decreased lung function, particularly in children; (4) Aggravated asthma; (5) Development of chronic bronchitis; (6) Irregular heartbeat; (7) Increased respiratory and cardiovascular hospitalizations; and (8) Premature death in people with heart or lung disease.

Epidemiological studies have provided continued and consistent evidence for most of the effects listed above. An association between increased daily or several-day-average concentrations of PM_{10} and excess mortality and morbidity is consistently reported from studies involving communities across the U.S. as well as in Europe, Asia, and South America.

A number of studies have evaluated the association between particulate matter exposure and indices of morbidity such as hospital admissions, emergency room visits or physician office visits for respiratory and cardiovascular diseases. The effects estimates are generally higher than the effects for mortality. The effects are associated with measures of PM_{10} and $PM_{2.5}$. Thus, it appears that when a relatively small number of people experience severe effects, larger numbers experience milder effects, which may relate either to the coarse or to the fine fraction of airborne particulate matter.

[25] See, e.g., U.S. Environmental Protection Agency, *Health and the Environment*, www.epa.gov/air/particlepollution/health.html. Accessed July 30, 2008; U.S. Environmental Protection Agency, *Particle Pollution and Your Health*, www.epa.gov/airnow/particles-bw.pdf. Accessed July 30, 2008.; California Air Resources Board, *Health Effects of Particulate Matter and Ozone Air Pollution*, January 2004.

In the National Morbidity, Mortality, and Air Pollution Study (NMMAPS), hospital admissions for those 65 years or older were assessed in 14 cities. Hospital admissions for these individuals showed an increase of 6 percent for cardiovascular diseases and a 10 percent increase for respiratory disease admissions, per 50 $\mu g/m^3$ increase in PM_{10}. The excess risk for cardiovascular disease ranges from 3-10 percent per 50 $\mu g/m^3$ PM_{10}. However, as noted below, this study analyzed indirect indicators of health impacts rather than direct health impacts, and other studies have demonstrated greater variability of the effects of PM increases in terms of number of medical visits.

Similarly, school absences, lost workdays and restricted activity days have also been used in some studies as indirect indicators of acute respiratory conditions. The results are suggestive of both immediate and delayed impact on these parameters following elevated particulate matter exposures. These observations are consistent with the hypothesis that increased susceptibility to infection follows particulate matter exposures.

Some studies have reported that short-term particulate matter exposure is associated with changes in lung function (lung capacity and breathing volume); upper respiratory symptoms (hoarseness and sore throat); and lower respiratory symptoms (increased sputum, chest pain and wheeze). The severity of these effects is widely varied and is dependent on the population studied, such as adults or children with and without asthma. Sensitive individuals, such as those with asthma or pre-existing respiratory disease, may have increased or aggravated symptoms associated with short-term particulate matter exposures. Several studies have followed the number of medical visits associated with pollutant exposures. A range of increases from 3 to 42 percent for medical visits for respiratory illnesses was found corresponding to a 50 $\mu g/m^3$ change in PM_{10}. A limited number of studies also looked at levels of $PM_{2.5}$. The findings suggest that both the fine and coarse fractions may have associations with some respiratory symptoms.

While most studies have evaluated the acute effects, some studies specifically focused on evaluating the effects of chronic exposure to PM_{10} and $PM_{2.5}$. Studies have analyzed the mortality of adults living in different U.S. cities. After adjusting for important risk factors, these studies found a consistent positive association of deaths and exposure to particulate matter. A similar association was observable in both total number of deaths and deaths due to cardiorespiratory causes. A shortening of lifespan was also reported in these studies.

Significant associations for $PM_{2.5}$ for both total mortality and cardiorespiratory mortality were reported in a study using data from the American Cancer Society. A re-analysis of the data from this study confirmed the finding.[26] The Harvard Six Cities Study evaluated several size ranges of particulate matter and reported significant associations with PM_{15}, $PM_{2.5}$, sulfates, and non-sulfate particles, but not with coarse particles (PM_{15}–

[26] Krewski D, Burnett RT, Goldberg MS, Hoover K, Siemiatycki J, Abrahamowicz M, White WH, et al. *Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality. A Special Report of the Institute's Particle Epidemiology Reanalysis Project.* 2000. Health Effects Institute.

$PM_{2.5}$). An extension of the Harvard Six Cities Cohort confirmed the association of mortality with $PM_{2.5}$ levels.[27] These studies provide evidence that the fine particles, as measured by $PM_{2.5}$, may be more strongly associated with mortality effects from long-term particulate matter exposures than are coarse compounds.

A follow-up study of the American Cancer Society cohort confirmed and extended the findings in the initial study. The researchers estimated that, on average, a 10 $\mu g/m^3$ increase in fine particulates was associated with an approximately 4 percent increase in total mortality, a 6 percent increase in cardiopulmonary mortality, and an 8 percent increase risk of lung cancer mortality.[28] The magnitude of effects is larger in the long-term studies than in the short-term investigations, and therefore demonstrates variability and unreliability of a specific numeric indicator (as indicated above) for the general population. Furthermore, an analysis of the American Cancer Society Cohort from the Los Angeles area used a more detailed estimate of long-term $PM_{2.5}$ exposures and found that the risk of mortality was up to three times higher than estimated with the national cohort.[29] These findings indicate that long-term exposures may be more important in terms of overall health effects.

Despite data gaps, the extensive body of epidemiological studies has both qualitative and quantitative consistency suggestive of causality. A considerable body of evidence from these studies suggests that ambient particulate matter, alone or in combination with other coexisting pollutants, is associated with significant increases in mortality and morbidity in a community.

In summary, the scientific literature indicates that an increased risk of mortality and morbidity is associated with particulate matter at ambient levels. The evidence for particulate matter effects is mostly derived from population studies with supportive evidence from clinical and animal studies. Although most of the effects are attributable to particulate matter, co-pollutant effects cannot be ruled out on the basis of existing studies. The difficulty of separating the effects may be due to the fact that particulate levels co-vary with other combustion source pollutants. That is, the particle measurements serve as an index of overall exposure to combustion-related pollution, and some component(s) of combustion pollution other than particles might be at least partly responsible for the observed health effects. In addition, limitations of applying the results of a singular study to determine a specific project's health effects are described above, as well as subsequent discussion (see "Relating Adverse Air Quality Impacts and Health Effects" on page 27). Therefore, at this time, there is no specific numeric indicator that can reliably indicate specific health effects from particulate matter.

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[27] Laden F, Schwartz J, Speizer FE, Dockery DW. *Reduction in Fine Particulate Air Pollution and Mortality.* 2006. Am J Respir Crit Care Med, 173:667-672.

[28] Pope III CA, Burnett RT, Thun MJ, Calle E, Krewski D, Kazuhiko I, Thurston G. *Lung Cancer, Cardiopulmonary Mortality, and Long-Term Exposure to Fine Particulate Air Pollution*. 2002. JAMA, 287:1132-1141.

[29] Jerrett M, Burnett RT, Ma R, Pope CA III, Krewski D, Newbold KB, Thurston G, Shi Y, Finkelstein N, Calle EE, Thun MJ. *Spatial Analysis of Air Pollution and Mortality in Los Angele*s. 2005. Epidemiology, 15(6):727-736.

Carbon Monoxide (CO)

Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply delivery to the heart. Inhaled CO has no known direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport, by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, people with conditions requiring an increased oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency), such as is seen at high altitudes. Reductions in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels, including preterm births and heart abnormalities. The U.S. EPA concluded in their most recent review that the evidence linking long-term CO exposures with reproductive health outcomes was suggestive of a causal relationship[30].

Nitrogen Dioxide (NO_2)

NO_2 is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. NO_2 is a gaseous air pollutant that serves as an indicator of gaseous oxides of nitrogen, such as nitric oxide (NO) and other related compounds (NO_X). NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. NO_X is also a precursor to the formation of ozone.

The adverse effects of ambient nitrogen dioxide air pollution exposure on health were reviewed in the 2008 U.S. EPA Integrated Science Assessment for Oxides of Nitrogen—Health Criteria[31], and more recently in the

[30] U.S. EPA. *Integrated Science Assessment for Carbon Monoxide (Final Report*). 2010. https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=218686. Accessed August 2019.
[31] U.S. EPA. *Integrated Science Assessment for Oxides of Nitrogen—Health Criteria (Final Report).* 2008. http://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=194645. Accessed August 2019.

2016 U.S. EPA Integrated Science Assessment for Oxides of Nitrogen—Health Criteria.[32] The 2016 U.S. EPA review noted the respiratory effects of NO_2, and evidence suggestive of effects on cardiovascular health, mortality and cancer.

Experimental studies have found that NO_2 exposures increase responsiveness of airways, pulmonary inflammation, and oxidative stress, and can lead to the development of allergic responses. These biological responses provide evidence of a plausible mechanism for NO_2 to cause asthma. Additionally, results from controlled exposure studies of asthmatics demonstrate an increase in the tendency of airways to contract in response to a chemical stimulus (airway responsiveness) or after inhaled allergens. Animal studies also provide evidence that NO_2 exposures have negative effects on the immune system, and therefore increase the host's susceptibility to respiratory infections. Epidemiological studies showing associations between NO_2 levels and hospital admissions for respiratory infections support such a link, although the studies examining respiratory infections in children are less consistent.

The Children's Health Study in Southern California found associations of NO_2 with respiratory symptoms in asthmatics.[33] Particles and NO_2 were correlated, and it was determined that NO_2 plays a stronger role. Ambient levels of NO_2 were also associated with a decrease in lung function growth in a group of children followed for eight years. In addition to NO_2, the decreased growth was also associated with particulate matter and airborne acids. The study authors postulated that these may be a measure of a package of pollutants from traffic sources.

Results from controlled exposure studies of asthmatics demonstrated an increase in the tendency of airways to contract in response to a chemical stimulus (bronchial reactivity). Effects were observed with an exposure to 0.3 parts per million (ppm) NO_2 for a period ranging from 30 minutes to 3 hours. A similar response is reported in some studies with healthy subjects at higher levels of exposure (1.5 - 2.0 ppm). Mixed results have been reported when people with chronic obstructive lung disease are exposed to low levels of NO_2.

Toxic Air Contaminants

In addition to criteria pollutants, a number of TACs have the potential to impact human health, including diesel particulate matter (DPM), a pollutant associated with heavy equipment and truck traffic. TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants

[32] U.S. EPA. *Integrated Science Assessment for Oxides of Nitrogen—Health Criteria (Final Report).* 2016. https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=310879. Accessed August 2019.
[33] McConnell R, Berhane K, Gilliland F, London SJ, Islam T, Gauderman WJ, Avol E, Margolis HG, Peters JM. *Asthma in exercising children exposed to ozone: a cohort study.* 2002. Lancet, 359:386-91.

discussed above, but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and non-carcinogenic, where carcinogenic TACs can cause cancer and non-carcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular).

DPM, which is emitted in the exhaust from diesel engines, was listed by the state as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 micrometer (μm)), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 μm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[34] [35] OEHHA's HARP model and Air Toxics Hot Spots Program Guidance Manual (Guidance Manual) for the Preparation of Health Risk Assessments includes an ability to link certain TACs with metrics for cancer-rates or non-cancer effects on certain organ groups.

RELATING ADVERSE AIR QUALITY IMPACTS AND HEALTH EFFECTS

The feasibility of determining a connection between air pollutant emissions and human health is different for a site-specific project, such as for a development project or local area plan, than it is for a larger regional scale analysis of an area-wide project, such as an analysis for a regulation change for the entire Air Coast Basin. As discussed below, directly correlating a single project's emissions in a typical City EIR to quantifiable human

[34] CARB, *Diesel Exhaust and Health*, www.arb.ca.gov/research/diesel/diesel-health.htm, Accessed August 2019.
[35] CARB, *Fact Sheet: Diesel Particulate Matter Health Risk Assessment Study for the West Oakland Community: Preliminary Summary of Results,* March 2008.

health consequences is currently not scientifically feasible, as it is not possible to conduct such an analysis that would provide reliable or meaningful results. As further discussed below, it is also infeasible to correlate regional emissions from local area-wide projects or plans identified in City EIRs to quantified human health consequences in any reliable or meaningful way, for many of the same reasons, and with additional challenges associated with separating and anticipating reasonably foreseeable emissions from other sources.

It should also be noted that in April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing the Friant Ranch decision in the review and analysis of proposed projects under CEQA in Sacramento County (Attachment 4). The SMAQMD is to date the only California air district to formally release, as guidance, an Interim Recommendation (April 2019) for lead agencies and practitioners preparing CEQA documents for projects within Sacramento County to comply with the Friant Ranch decision. Consistent with the expert opinions submitted to the Court in Friant Ranch by the San Joaquin Valley Air Pollution Control District (SJVAPCD) (Attachment 3) and SCAQMD (Attachment 2), the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to the likely health consequences to people of project-generated criteria air pollutant emissions. The SMAQMD guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the Friant Court's advice to explain in meaningful detail why this analysis is not yet feasible.

The following information is therefore provided to explain that for most projects and local level plans analyzed in City EIRs, it is currently not scientifically feasible to provide a reliable quantitative analysis directly correlating a project's significant pollutant emissions and human health.

Existing Models and Tools

As previously described, a number of existing models and tools exist for quantifying both project emissions and pollutant concentrations. Certain federal and state public health standards for air quality are set in terms of acceptable regional concentration levels of pollutants. The SCAQMD demonstrates attainment of these concentration standards, in part, by setting CEQA thresholds for amounts of construction and operational emissions produced by individual projects or plans. In compliance with CEQA and the identified thresholds, City EIRs for individual development projects and local-level plans disclose and analyze project *emissions* for criteria pollutants and pollutant concentrations for TACs. For CEQA purposes, *concentrations* of criteria pollutants are typically not calculated. While it may be possible to utilize a project's emission data to determine concentration amounts, this would hinge the analysis on an additive range of assumptions and uncertainties, thus contributing to a higher margin of error. In addition, an accurate model of the data would also require a complex set of input data which may not be readily available or would otherwise contribute further to the

unreliability of the results. Furthermore, additional limitations exist for utilizing both regional and local models for this purpose. As such, modeling these concentrations of criteria pollutants utilizing existing tools would result in unreliable data, as discussed in further detail below.

Modeling Concentrations v. Emissions

In order to relate a project's emissions to human health effects, it would first be necessary to model the air pollutant concentrations resulting from a project. As discussed above, studies which link health effects with exposure to pollutants are primarily based on the ultimate ambient or regional concentrations of pollutants. This is especially true for secondary pollutants such as ozone and PM. The lack of correlation between the direct *quantity* of precursor pollutants and the *concentration* of ozone or secondary PM formed is important because it is not necessarily the *quantity* of precursor pollutants (such as NO_X, SO_2, VOCs, etc.) that causes human health effects; rather, it is the *concentration* of resulting ozone and secondary PM that causes these effects. Indeed, the ambient air quality standards for ozone, which are statutorily required to be set by USEPA (at levels that are requisite to protect the public health with a margin of safety) and by CARB (at levels that are requisite to protect the health of the most sensitive groups) are established as concentrations of ozone and not as quantity (i.e., tonnages) of ozone precursor pollutants.[36] [37] Furthermore, since the ambient air quality standards are focused on achieving a particular concentration region-wide, the regional models and health impact analysis tools (i.e., BenMAP-CE, CAMx, CMAQ) and plans for attaining the ambient air quality standards are also regional in nature. However, as further described below (pages 31-32), these regional models are not useful for analysis of the health impacts of specific projects on any given geographic location.

Complexities of Modeling Concentrations

In requiring a health risk type analysis for criteria air pollutants, it is important to understand how criteria pollutants are formed, dispersed, and regulated. As an example, ground level ozone (smog) is not directly emitted into the air, but is instead formed when precursor pollutants such as NO_X and VOC are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.[38] Once formed, ozone can be transported long distances by wind.[39] Due to the complexity of ozone formation, a specific tonnage amount of NO_X

[36] U.S. EPA, *Table of Ozone National Ambient Air Quality Standards,* https://www.epa.gov/ground-level-ozone-pollution/table-historical-ozone-national-ambient-air-quality-standards-naaqs. Accessed August 2019.
[37] CARB, *California Ambient Air Quality Standards*, https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed August 2019.
[38] SJVAPCD, *Application for Leave to File Amicus Curiae Brief of SJVAPCD in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P,* April 13, 2015. Page 4. Included as Attachment 2 of this memorandum.
[39] U.S. EPA, *Ground-level Ozone: Basic Information*, www.epa.gov/airquality/ozonepollution/basic.html. Accessed August 2019.

or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area.[40] In fact, even rural areas that have relatively low emissions of NO_X or VOCs can have high ozone concentrations simply due to wind transport and other meteorological conditions such as temperature inversion and high pressure systems. Conversely, areas that have substantially more NO_X and VOC emissions could experience lower concentrations of ozone simply because sea breezes disperse the emissions.[41]

For those projects where regional construction and operational emissions exceed the SCAQMD's recommended daily significance thresholds, this does not mean that one can determine with accuracy the concentration of ozone that will be created at or near the Project Site on a particular day or month of the year, or the specific human health effects that may occur. Meteorology, the presence of sunlight, geographical distribution of emissions, and other complex photochemical factors all combine to determine the ultimate concentrations and locations of ozone. This is especially true for the typical development project where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the Project Site.

As another example, particulate matter can be divided into two categories: directly emitted PM and secondary PM. While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to a specific local PM concentration because it can be transported long distances by wind.[42] Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxide and NO_X. Due to the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

Furthermore, for modeling to produce reliable results, it is necessary to have data regarding the sources and types of toxic air contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence).[43] Not all of these specific details or factors may be known at the time that a project or plan is undergoing CEQA review. For example, it may not be

[40] SJVAPCD, *Application for Leave to File Amicus Curiae Brief of SJVAPCD in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P.*, April 13, 2015. Page 4. Included as Attachment 2 of this memorandum.

[41] SJVAPCD, *2007 Ozone Plan, Executive Summary*. Page ES-6. www.valleyair.org/Air_Quality_Plans/AQ_Final_Adopted_Ozone2007.htm. Accessed August 2019.

[42] U.S. EPA, *Particulate Matter: Basic Information*, www.epa.gov/airquality/particlepollution/basic.html. Accessed August 2019.

[43] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Pages 9, 10. Included as Attachment 2 of this memorandum.

feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)).[44]

Purposes and Limitations of Regional Models

As described above, local, state, and federal standards are set with the purpose of attaining ambient air quality standards within the region for the protection of public health. In part to meet these ambient standards, the SCAQMD has set numeric thresholds for land-use projects to determine significant air quality impacts. These thresholds are based on regional project emissions, which refer to the actual *quantity* of pollutants generated by the project, and are measured in pounds per day. These pollutant sources (e.g., onsite natural gas usage and offsite vehicular exhaust across the regional roadway network) can be estimated, measured, and quantified. However, once a project's emissions enter the environment, these emissions are subject to a number of complex factors and variables, including chemical changes, dispersal, and weather variation, and ultimately combine with other existing conditions to result in the regional ambient air quality and concentrations of pollutants.

The SCAQMD (and other regional air quality management and air pollution control districts) conducts regional-scale modeling in order to evaluate regional-scale air pollution, including modeling for the AQMP, modeling attainment demonstrations, and the Multiple Air Toxics Exposure Study (MATES) studies. This involves a regional scale photochemical model such as CAMx and CMAQ, which have a modeling domain on the order of hundreds of kilometers. Mobile source emissions are estimated using EMFAC and SCAG RTP/SCS VMT data and traffic data obtained from Caltrans for the entire basin. The effort, resources, and availability of necessary input data required to perform this type of analysis is complex and extensive, and is infeasible for smaller projects.

Unreliability of Using Regional Models at Smaller Scale

As noted in the Brief of Amicus Curiae by the South Coast Air Quality Management District in the Friant Ranch case (Attachment 2), SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, and thus it is uniquely situated to express an opinion on how lead agencies should correlate air quality impacts with specific health outcomes.[45] The computer models (e.g., CMAQ modeling platform)[46] used to simulate and predict an attainment date for ozone are based on regional inventories of precursor pollutants and meteorology within an air basin. At a very basic level, based on

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[44] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Page 10. Included as Attachment 2 of this memorandum.

[45] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Pages 9, 10. Included as Attachment 2 of this memorandum.

[46] The SCAQMD 2016 AQMP ozone attainment demonstration was developed using the U.S. EPA recommended CMAQ (version 5.0.2) modeling platform with SAPRC07 chemistry, and the Weather Research and Forecasting Model (WRF) (version 3.6) meteorological fields.

gross assumptions appropriate for regional-scale analyses, the models simulate future ozone levels based on predicted changes in precursor emissions basin wide. It should be noted that it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region.[47] The computer models are not designed to determine whether the emissions generated by an individual development project, or even emissions from most relatively small-scale areas such as specific plan areas or community plan areas, will affect the date that the air basin attains the ambient air quality standards. Instead, the models help inform regional planning strategies based on the extent all of the emission-generating sources within the air basin must be controlled in order to reach attainment.[48]

In addition, this modeling is inappropriate for project-level or local plan-level analysis, as small changes in modeling results could be well within the normal gross margin of error of the CMAQ model performance. For example, SCAQMD states the expected margin of error for comparing CMAQ modeled daily maximum air pollutant concentrations to monitored concentrations is 20 percent.[49] However, even the expected 20 percent margin of error is exceeded in regional scale analyses. SCAQMD found that when maximum values equal or exceed 60 ppb, the normalized gross maximum error ranges from 15.7 to 19.8 percent for the coastal region, 11.5 to 22.3 percent for the San Fernando region, 12.1 to 25.2 for the foothills region, 14.7 to 18.2 for the urban source region, 12.5 to 20.9 percent for the urban receptor region, and 9.6 to 16.8 for the Coachella Valley.[50] The quarterly error statistic for $PM_{2.5}$ ranges from 54 percent to 95.7 percent for the coastal region, 30.1 to 60.6 percent for the San Fernando region, 30.7 to 81.6 percent for the foothills region, 41.1 to 81.6 percent for the urban source region, 23.5 to 53 percent for the urban receptor region, and 38 to 59.6 percent for the Coachella Valley region.[51]

Therefore, using these regional models at the project-level or local plan-level scale would not yield reliable results, as the emissions from a localized project would be small in comparison, falling within margins of error of the regional models. Therefore, results regarding project or local plan-level emissions would not be meaningful or statistically significant.

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[47] SCAQMD, *Final 2012 AQMP*, February 2013, https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/appendix-v-final-2012.pdf, Appendix V. pages v-4-2, v-7-4, v-7-24. Accessed August 2019.

[48] SJVAPCD, *Application for Leave to File Amicus Curiae Brief of SJVAPCD in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P.,* April 13, 2015. Page 6-7. Included as Attachment 2 of this memorandum.

[49] SCAQMD, *Final 2016 AQMP,* 2017. Appendix V-2-3. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-v.pdf?sfvrsn=10. Accessed August 2019.

[50] SCAQMD, *Final 2016 AQMP,* 2017. Appendix V, Tables V-5-3 through V-5-8. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-v.pdf?sfvrsn=10. Accessed August 2019.

[51] Ibid. Table V-6-3

Purposes and Limitations of Localized Models

Certain models (such as AERMOD and HARP) may be able to direct certain pollutant concentrations locally with reliable accuracy. However, these are used to prepare project-level health risk assessments (HRAs) for pollutants like DPM and other TACs, and do not address secondary pollutants such as ozone. Regarding the use of other potential localized models such as CALINE-4, the City's CEQA documents currently provide CO hotspot analyses where appropriate. However, per guidance from the SCAQMD and Caltrans, further modeling of other pollutants would be inappropriate using CALINE-4.[52] In addition, while these models are able to estimate concentrations for certain pollutants, no methods have been demonstrated to reliably and meaningfully connect these pollutant concentrations to specific health effects.

If an attempt were made to potentially utilize a localized model to determine a project's resulting pollutant concentrations, most likely an analysis would follow a methodology similar to how localized air quality analyses are currently performed for CEQA (e.g., freeway HRAs). For example, a project's vehicle emissions could be determined using CalEEMod or EMFAC. The project-related traffic emissions within a ¼ mile of the project site could then be combined with project-related emissions from on-site sources and analyzed for receptors in the vicinity using AERMOD on a microscale basis. The analysis could load traffic emissions along the roadway network consistent with the traffic study. This approach could be used for CO, NO_2, PM_{10}, and $PM_{2.5}$; however, this would not address other pollutants, these models include additional limitations, and a number of uncertainties would be included in the modeling assumptions. Some of the limitations and uncertainties of this approach would include:

Pollutant Emissions. CalEEMod generates total daily regional-wide emissions from a project. These emissions account for different trip lengths based on the trip generation (residential vs. commercial, commute vs. delivery, etc.) and trip type (primary, diverted, pass-by). It would be speculative to assume on a regional basis where these emissions were to occur. It would also be speculative to assume which types of vehicles would use specific roadways (e.g., diesel delivery trips associated with a Project would likely use different routes than commuter trips).

Spatial and temporal data. It would be speculative to assume when and where vehicles would be travelling. AERMOD assumes steady state conditions and may not be able to account for variations in meteorology as well as seasonal variations.

[52] Caltrans, *Project-Level Air Quality Analysis*. https://dot.ca.gov/programs/environmental-analysis/air-quality/project-level-air-quality-analysis. Accessed August 2019.

Ambient data. Health impacts are highly dependent on ambient air quality levels. While data at ambient monitoring stations may be available, nearby localized sources (e.g.; stationary emissions and major roadways) are not known and are not accounted for.

Chemistry. AERMOD is unable to process chemical reactions related to secondary PM and ozone formation.

The combination and compounding of the uncertainties from each component and step of the modeling analysis, particularly in the context of the very small increment of change in regional ambient air pollutant concentrations that a single project would be predicted to cause, would likely result in large margins of error for the overall modeled outcomes. That is, even if a model reports a certain outcome, the actual outcome may be in a relatively broad range surrounding the reported outcome. When these uncertainties are factored into the modeling analysis, the results would not be able to provide a meaningful estimate of health impacts. Furthermore, as described in further detail below, even if reliable pollutant concentration data were available, the concentration information could not be reliably and directly related to a health impact at this time.

Metrics for Determining Health Effects

CEQA Thresholds and Relationship to Specific Health Effects

As one of the many paths that the SCAQMD has established to lead the district towards achieving acceptable levels of pollutant concentrations region-wide, the agency has set CEQA thresholds of significance for project emission quantities. These SCAQMD thresholds are related to basin-wide emissions, are cumulative in nature, and do not indicate thresholds for project-specific concentrations related to particular health effects. Therefore, it should be noted that the SCAQMD regional significance thresholds are not direct indicators of specific health effects.

For example, with respect to ozone precursor emissions, the SCAQMD has set its operational CEQA significance threshold for NO_X and VOC at 10 tons per year (expressed as 55 pounds per day). This is based on the federal Clean Air Act, which defines a major stationary source for extreme ozone nonattainment areas such as the SCAQMD as one emitting 10 tons per year. Under the federal Clean Air Act, such sources are subject to enhanced control requirements, thus SCAQMD determined that 55 pounds (less than .03 tons) per day was an appropriate threshold for making a CEQA significance finding and requiring feasible mitigation. For context, according to the most recent EPA-approved SCAQMD basin-wide emissions inventory, the VOC inventory for emissions is 500 tons per day and for NO_X emissions is 522 tons per day for the baseline year of 2012.[53] The

[53] SCAQMD, *Final 2016 AQMP*, 2017. Figure 3-3. http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp. Accessed August 2019.

threshold quantity of 55 pounds per day therefore represents a very small percentage (approximately .005 percent) of total daily basin-wide emissions. It should also be noted that from a scientific standpoint, it takes a large amount of additional precursor emissions to cause a statistically significant increase in ambient ozone levels over an entire region. In the case of ozone, the SCAQMD's 2012 AQMP showed that reducing baseline year 2008 NO_X by 432 tons per day and reducing VOC by 187 tons per day would only reduce ozone levels at the SCAQMD's monitor site with the highest levels by 9 parts per billion.[54] Therefore, the SCAQMD has stated that "…a project source that emits 10 tons/year of NO_X or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_X with specific health impacts from ozone."[55] Therefore, the SCAQMD has stated that the agency does not currently know of a way to accurately quantify ozone-related health impacts caused by VOC or NO_X emissions from relatively small projects[56], although this type of analysis may potentially be feasible for regional-scaled projects with very high emissions of ozone precursors.

Lack of Established Metrics by Expert Agencies

Furthermore, both the SCAQMD and SJVAPCD have indicated that it is not feasible to quantify project-level health effects from ozone and secondary-formed pollutants based on available modeling techniques.[57] [58] The SCAQMD Brief also cites the author of the CARB methodology, which reported that a $PM_{2.5}$ methodology is not suited for small projects and may yield unreliable results.[59] In addition, it would be infeasible to determine, with any degree of reliability, the impact on attainment of the ambient air quality standards and the number of nonattainment days that may result when a Project exceeds regional thresholds, and any findings would be speculative. As discussed above, the currently available regional models and health impact analysis tools (i.e., BenMAP-CE, CAMx, CMAQ) are equipped to model the impact of all emission sources in an air basin to demonstrate attainment.

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[54] SCAQMD, *Final 2012 AQMP*, February 2013, https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/appendix-v-final-2012.pdf, Appendix V. pages v-4-2, v-7-4, v-7-24. Accessed August 2019.

[55] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Page 12. Included as Attachment 2 of this memorandum.

[56] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Page 12. Included as Attachment 2 of this memorandum.

[57] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Included as Attachment 2 of this memorandum.

[58] SJVAPCD, *Application for Leave to File Amicus Curiae Brief of SJVAPCD in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P.,* April 13, 2015. Included as Attachment 2 of this memorandum.

[59] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Page 14. Included as Attachment 2 of this memorandum.

Even if a metric could be calculated, it would not be reliable because the models attempt to evaluate the impact of all emission sources in an air basin on attainment and would likely not yield information with sufficient statistical certainty or a measurable increase in ozone concentrations sufficient to quantify health effects for an individual project. The SCAQMD Brief concludes, with respect to the Friant Ranch EIR, that although it may have been technically possible to plug the data into a methodology, the results would not have been reliable or meaningful.[60] No expert agency, including the SCAQMD and CARB, have approved a quantitative method to reliably and meaningfully translate mass emission estimates of criteria pollutants to specific health effects.

Limitations of Extrapolating Metrics from Health Impact Assessments

Current HRA tools are able to provide some insight into potential health effects from project TACs and these tools have been specifically designed to evaluate how toxic emissions are released, how they disperse throughout an area, and the potential for those toxic pollutants to impact human health. However, these tools for TAC analysis do not address criteria pollutants and their related specific health effects, and also present their own limitations. HRAs typically include three separate components: an emissions inventory, dispersion modeling, and health risk calculations. OEHHA's HARP model and Air Toxics Hot Spots Program Guidance Manual (Guidance Manual) for the Preparation of Health Risk Assessments includes an ability to link certain air quality compounds with metrics for cancer-rates or non-cancer effects on certain organ groups.

The Guidance Manual identifies Response Exposure Levels (RELs) for various pollutants, which are concentration levels at (or below) which no adverse non-cancer health effects are anticipated for a specific exposure duration, usually specific to certain target organs. Exceeding the REL does not automatically indicate an adverse health impact, as the REL is not the threshold where population health effects would first be seen. However, increasing concentrations above the REL value increases, with an undefined probability, the likelihood that the health effect will occur.[61] These RELs are developed by OEHHA based on a highly technical and robust research process, including data gathering, modeling, determining appropriate parameters, making extrapolation adjustments, addressing variables and factors of uncertainty, consulting with expert agencies and the public, and undergoing scientific review. As such, the HARP model has become an accepted industry standard in evaluating health impacts from TACs and providing reliable and meaningful analysis, although the limitations of this analysis is also disclosed in HRA documents.

It should also be noted that the process of assessing health risks and impacts itself includes a degree of uncertainty, dependent on the availability of data and the extent to which assumptions are relied upon in cases

[60] SCAQMD, *Application of the SCAQMD for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae,* April 6, 2015. Page 15. Included as Attachment 2 of this memorandum.
[61] OEHHA. *Air Toxics Hot Spots Program Guidance Manual.* February 2015. page 6-2. https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed August 2019.

where the data are incomplete or unknown. In general, sources of uncertainty that may lead to an overestimation or an underestimation of the risk include: extrapolation of toxicity data in animals to humans, uncertainty in the estimation of the emissions, uncertainty in the air dispersion models, and uncertainty in the exposure estimates.[62] In addition to uncertainty, there is a natural range or variability in measured parameters defining the exposure scenario, including variation among the human population. Risk estimates generated by an HRA should therefore not be interpreted as the *expected* rates of disease in the exposed population but rather as *estimates* of potential for disease, based on current knowledge and a number of assumptions.[63]

For criteria pollutants, OEHHA guidance for health risk has only been identified for short-term one-hour peak exposures (acute inhalation) for CO, H_2S, NO_2. Ozone, SO_x, and SO_2, and otherwise the guidance lacks cancer potency factors or RELs for any longer-term exposure of any criteria pollutant. Even so, the HARP model which utilizes these factors or RELs is utilized for stationary sources and does analyze health impacts from mobile source emissions. As emissions from projects analyzed in City local-plan or project EIRs are usually heavily comprised of mobile source emissions, utilization of the HARP model for this analysis would not be useful to provide meaningful information regarding health impacts. Therefore, existing models utilizing these RELs for acute inhalation are not able to provide sufficient information about direct health impacts or probability of specific adverse health effects from criteria pollutants for City EIR projects.

In general, health impact assessments also use Concentration-Response (C-R) functions. C-R functions determine the relationship between the change in pollutant concentration and change in health impacts (baseline vs. project). It should be noted that not all C-R functions are linear. Using AERMOD or Cal3QHC/CALINE4, there is no reliable method to estimate baseline conditions at a project's buildout. While ambient monitoring data is available throughout the air basin, this does not account for nearby related projects or other stationary sources.

There are also many C-R functions based on pollutants, specific health impacts, age, race, pollutant uptake rates, sensitivity to specific pollutants, and other criteria. When calculating health impacts, the appropriate C-R functions would need to be selected. Due to the level of speculation required to make these assumptions, this could expose a project to potential challenges, as experts may debate about the correct C-R function used for analyses. As discussed above, while a microscale model could be used for some aspects of projects to address localized roadway impacts, linking specific health effect to concentrations would be speculative under CEQA due to the uncertainties in such an analysis, as discussed above.

[62] Ibid. page I-5.
[63] Ibid. page I-6.

Limitations on Extrapolating Metrics from Existing Health Studies

In the absence of an adopted metric by an expert agency identifying emission or concentration levels with a particular health effect, there is information on this topic available within a body of health research and series of independent studies, as generally described in previous sections and in Attachment 1 (SCAQMD Final 2016 AQMP, Appendix I: Health Effects). However, utilizing this body of work can also be problematic if attempting to make reliable or meaningful conclusions relating project emissions to specific health impacts, For example, many of the health studies rely on specific population subgroups or provide limited sample sizes, and therefore have conclusions which would not apply to health effects on the general public. In addition, within the universe of these studies, there exists a broad range of findings and at times, inconsistent conclusions between studies. Research in this field is also subject to other limitations, including the scientific infeasibility of parsing out specific pollutants from other variables with an acceptable degree of certainty, which results in weak causal relationships between particular pollutants and specific health effects. Therefore, it would be speculative to use a limited study to relate concentrations of any specific pollutant to specific health impacts for a number of reasons. While pollutant increments could be compared to relevant data identified from a specific study, it is not recommended to base findings of a specific health-related impact on any single limited study. Therefore, even if a project's pollutant concentrations could be determined with an acceptable degree of accuracy, existing available information could still only provide a range or general idea of health impacts to the population at large.

Health Effects from Regional Emissions Generated by Local Plans or Projects are Likely Nominal

The SCAQMD also conducted pollutant modeling for proposed Rule 1315 in which the CEQA analysis accounted for essentially all of the increases in emissions due to new or modified sources in the District between 2010 and 2030, or an approximate increase of 6,620 pounds per day of NO_X and 89,947 pounds per day of VOC. At this regional scale, the SCAQMD was able to correlate this very large emissions increase to expected health outcomes from ozone and particulate matter. The results of the analysis showed that this increase of regional pollutant emissions would contribute to only a small increase in the air basin wide ozone concentrations in 2030 of 2.6 ppb and less than 1 ppb of NO_2.[64]

Comparatively, a typical City project emits much lower amounts of pollutant emissions. For City projects that generate emissions exceeding SCAQMD's operational significance thresholds, (e.g., peak daily regional

[64] SCAQMD, *Final Program Environmental Assessment for Re-Adoption of Proposed Rule 1315,* 2011. Page 1-11. https://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects/aqmd-projects---year-2011/re-adoption-of-proposed-rule-1315.

emissions of 150 pounds per day of PM_{10} and 55 pounds per day of NO_X, VOC or $PM_{2.5}$), these projects also typically represent relatively small amounts of pollutant emissions, with regional impacts which may not even be detected by current regional air quality models. For example, when comparing the Rule 1315 analysis to a large City project, such as the Olympia Project (a mixed-use development with 1.8 million square feet of floor area on a 3.3-acre site), Olympia's regional operational emissions would result in approximately 2 pounds of VOC and 12 pounds of NO_X over the SCAQMD's significance thresholds, or approximately 0.06 and 1.0 percent of the emissions analyzed by SCAQMD related to Rule 1315, respectively.

As a further comparison to a local plan or community plan-level City project, such as the Hollywood Community Plan Update (which anticipates an approximate 27 percent increase for both housing/population and employment within a 22 square mile regional center within the City), the plan's regional operational emissions would result in an increase of 472 lbs. per day in VOCs and a decrease of 2,763 lbs. per day of NO_X, or approximately 0.5 percent of the VOC emissions analyzed by SCAQMD related to Rule 1315. NO_X emissions would decrease under the Community Plan and would therefore not exceed any significant thresholds. This demonstrates that most City projects studied in project and plan-level EIRs would result in emissions at much lower rates than those necessary to be able to correlate project emissions with specific health effects. Furthermore, construction and operational emissions are typically more regional (e.g., emitted by mobile sources distributed across region's roadway network) and different than the identified stationary sources as modeled in SCAQMD's analysis of Rule 1315, which would add to the difficulties of modeling project-related emissions.

Running the regional-scale photochemical grid model used for predicting ozone attainment with the emissions from any individual project or even a relatively small-scale area project would not yield reliable information regarding a measurable increase in ozone concentrations sufficient to accurately quantify ozone-related health effects. Any modeled increase in ozone concentrations would not be useful for a meaningful analysis, as the increase would be so comparatively small that it would be well within the margin of error of such models. Similarly, it would also not be feasible to identify a Project's impact on the days of nonattainment per year. Based on this information, a general description of the adverse health effects resulting from the pollutants at issue is all that can be feasibly provided at this time.

CONCLUSION

Federal and state ambient air quality standards are designed to prevent the harmful effects of air pollution. These standards are continually updated based on evolving research, including research which relates air quality impacts with health effects. At the regional level, plans such as the SCAQMD's AQMP and SCAG's RTP/SCS work to ensure that the South Coast Air Basin reaches and maintains attainment with these federal and state standards. Locally, the City's EIRs evaluate a plan or project's consistency with applicable policies identified in the SCAQMD's AQMP and SCAG's RTP/SCS. City EIRs also identify regulatory compliance measures which work to limit risk and exposure to TACs. In addition, in evaluating air quality impacts on a plan- or project-level, the City's EIRs utilize thresholds guidance and air quality models established by the SCAQMD, which have been developed to implement these regional plans for attainment and protection of public health. Improvements to air quality in the region attest to the efficacy of these plans and local implementation practices.

For local plans or projects that exceed any identified SCAQMD air quality threshold, City EIR documents typically identify and disclose generalized health effects of certain air pollutants but are currently unable to establish a reliable connection between any local plan or project and a particular health effect. In addition, no expert agency has yet to approve a quantitative method to reliably and meaningfully do so. A number of factors contribute to this uncertainty, including the regional scope of air quality monitoring and planning, technological limitations for modeling at a local plan- or project-level, and the intrinsically complex nature between air pollutants and health effects in conjunction with local environmental variables. Therefore, at the time, it is infeasible for City EIRs to directly link a plan's or project's significant air quality impacts with a specific health effect. However, as air quality modeling and research on health effects advances over time, the City will continue to seek the latest guidance from local air quality agencies and experts and refine its approach based on future information as it becomes available.

ATTACHMENT 1

SCAQMD FINAL 2016 AQMP - APPENDIX I HEALTH EFFECTS

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Appendix I

Health Effects

2016 AIR QUALITY MANAGEMENT PLAN



March 2017

FINAL 2016 AQMP
APPENDIX I

HEALTH EFFECTS

MARCH 2017

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD

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Speaker of the Assembly Appointee

Vice Chairman: BEN BENOIT
Mayor Pro Tem, Wildomar
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Senate Rules Committee Appointee

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Publications from Health Related Research Projects Funded by SCAQMD

INTRODUCTION

This document presents a summary of scientific findings on the health effects of ambient air pollutants. The California Health and Safety Code Section 40471(b) requires that the South Coast Air Quality Management District (SCAQMD) prepare a report on the health impacts of particulate matter in the South Coast Air Basin (SCAB) in conjunction with the preparation of the Air Quality Management Plan (AQMP) revisions. This document, which was prepared to satisfy that requirement, also includes sections discussing the health effects of the other major pollutants. The intention of this document is to provide a brief summary of the conclusions of scientific reviews conducted by U.S. EPA and other scientific agencies, with some additional information from more recently published studies.

In addition to the air pollutant health effects summaries, there is an Attachment to this Appendix, which is a list of publications that have resulted from health-related research projects sponsored by SCAQMD over the past several years. Some of these studies are discussed in this Appendix, as appropriate, although there are many other studies referenced here. The studies funded by SCAQMD also help inform the SCAQMD's work in characterizing the air pollution and its effects in our local region and the influences of sources of air pollution in the Basin.

While information on ambient air quality statistics, attainment status, spatial distribution of air pollutants, environmental justice, socioeconomic impacts, control strategies, and cost-effectiveness are important issues that may relate to health effects, these issues are not the focus of this Appendix, and are instead discussed in detail in other chapters and appendices of the AQMP, or in the AQMP Socioeconomic Report.

HEALTH EFFECTS OF AIR POLLUTION

Ambient air pollution is a major public health concern. Excess deaths and increases in illnesses associated with high air pollution levels have been documented in several episodes as early as 1930 in Meuse Valley, Belgium; 1948 in Donora, Pennsylvania; and 1952 in London. Although levels of pollutants that occurred during these acute episodes are now unlikely in the United States, ambient air pollution continues to be linked to increases in illness and other health effects (morbidity) and increases in death rates (mortality).

Adverse health outcomes linked to air pollution include cardiovascular effects, premature mortality, respiratory effects, cancer, reproductive effects, neurological effects, and other health outcomes. The evidence linking these effects to air pollutants is derived from population-based observational and field studies (epidemiological), toxicological studies, as well as controlled laboratory studies involving human subjects and animals. There have been an increasing number of studies focusing on the mechanisms (that is, on learning how specific organs, cell types, and biomarkers are involved in

the human body's response to air pollution). Yet the underlying biological pathways for these effects are not always clearly understood.

Although individuals inhale pollutants as a mixture under ambient conditions, the regulatory framework and the control measures developed are pollutant-specific for six major outdoor pollutants covered under Sections 108 and 109 of the Clean Air Act. This is appropriate, in that different pollutants can differ in their sources, their times and places of occurrence, the kinds of health effects they may cause, and their overall levels of health risk. Different pollutants, from the same or different sources, oftentimes occur together. While the combined effects of multiple air pollutants that occur simultaneously may be important, the air quality standards address each criteria pollutant separately, and thus, this Appendix is divided into sections by pollutant. To meet the air quality standards, comprehensive plans are developed such as the Air Quality Management Plan (AQMP); and to minimize exposure to toxic air contaminants in the South Coast AQMD, a local air toxics control plan is also prepared. These plans examine multiple pollutants, cumulative impacts, and transport issues related to attaining healthful air quality. A brief overview of the effects observed and attributed to various air pollutants is presented in this Appendix. Because the SCAB exceeds the federal standards for ozone and PM2.5, this Appendix focuses more attention in the discussion of these two pollutants, since the health impacts within the SCAB are potentially greater for these two pollutants compared to the health impacts of the other criteria pollutants. For the other pollutants, a brief summary of the associated health effects is provided.

This summary is drawn substantially from reviews presented previously (South Coast Air Quality Management District 1996; South Coast Air Quality Management District 2003; South Coast Air Quality Management District 2007; South Coast Air Quality Management District 2013b), and from the most recent U.S. EPA Integrated Science Assessment (ISA) reviews for Ozone (U.S. EPA 2013b), Carbon Monoxide (U.S. EPA 2010), Particulate Matter (U.S. EPA 2009), Nitrogen Oxides (U.S. EPA 2016), Sulfur Dioxide (U.S. EPA 2008), and Lead (U.S. EPA 2013a). Additional reviews prepared by the California Air Resources Board and the California EPA Office of Environmental Health Hazard Assessment for Particulate Matter (California Air Resources Board and Office of Environmental Health Hazard Assessment 2002), for Ozone (California Air Resources Board and Office of Environmental Health Hazard Assessment 2005) and for Nitrogen Dioxide (California Air Resources Board and Office of Environmental Health Hazard Assessment 2007) were included in the summary. In addition, several large review articles on the health effects of air pollution also helped inform this Appendix (American Thoracic Society 1996a; Brunekreef et al. 2002). More detailed citations and discussions on air pollution health effects can be found in these references.[1] Additionally, a supplemental literature review of mortality and morbidity impacts of PM2.5, ozone, NO_2, and SO_2 was conducted for the AQMP Socioeconomic Evaluation to identify more recent studies (Industrial Economics Inc. 2016b; Industrial Economics Inc. 2016a); this health effects summary also draws upon this literature review to discuss these more recent studies, particularly those published since the

[1] Most of the studies referred to in this Appendix are cited in the above sources. Only specific selected references to provide examples of the types of health effects are cited in this summary.

most recent ISA's. This summary highlights studies that were conducted in the South Coast Air Basin or in Southern California, or alternatively, in California, if few studies from our local region are available on the specific topic. Studies conducted in Southern California give an important "local perspective" in understanding and evaluating the health effects of air pollution. However, studies conducted in other locations also provide critical information that is pertinent to advancing the scientific understanding of the health effects of air pollution, including effects on our local population. As such, this summary also discusses key studies that were conducted in other locations.

Over the decades of national reviews of outdoor air pollution and their health impacts, the U.S. EPA has developed a list of five criteria by which the strength and credibility of data can be judged. This five-tier weight-of-evidence approach provides an objective basis for assessing the breadth, specificity, and consistency of evidence concerning a particular health outcome. Table I-1 shows the five descriptors used by the U.S. EPA for assessing causality, using a weight-of-evidence approach. Within each section discussing a specific pollutant are tables showing summaries of the U.S. EPA conclusions regarding the causality of air pollution health effects, which are the conclusions of their scientific evaluation of the research studies they have reviewed. For the criteria pollutants, the discussion in this Appendix will focus only on those categories of health effects for which the U.S. EPA has determined there is a causal or likely causal relationship with the pollutant, while other health effects may be discussed briefly. In particular, because of the relatively long time gap since the latest U.S. EPA ISA for PM (in 2009), and because the SCAB currently exceeds the federal standards for PM2.5, some additional health endpoints that are emerging as areas of interest with regard to PM exposure are discussed briefly in this Appendix.

It is important to note that the U.S. EPA is tasked with assessing new and emerging air quality science, including health studies, as part of the process of setting the federal air quality standards. In other words, the U.S. EPA's role is to assess the causal relationships between the pollutants and the different types of health endpoints. It is SCAQMD's role to describe the public health impacts of poor air quality in our region, as well as to develop and implement an emission reduction strategy to attain the federal and state ambient air quality standards. Therefore, it is not the intention of this Appendix to assess whether there is or is not an effect of a specific air pollutant on any particular health endpoint, but rather to summarize the health effects and causal determinations as assessed by U.S. EPA and other scientific agencies, to discuss some recent studies published since the latest U.S. EPA reviews, to give some quantitative estimates of the health impacts of particulate matter air pollution in the South Coast Air Basin, and to present a "local perspective" by highlighting studies conducted in the South Coast Air Basin, Southern California, or California.

TABLE I-1

U.S. EPA's Weight of Evidence Descriptions for Causal Determination of Health Effects

DETERMINATION	WEIGHT OF EVIDENCE
Causal Relationship	Evidence is sufficient to conclude that there is a causal relationship with relevant pollutant exposures. That is, the pollutant has been shown to result in health effects in studies in which chance, bias, and confounding could be ruled out with reasonable confidence. For example: (a) controlled human exposure studies that demonstrate consistent effects; or (b) observational studies that cannot be explained by plausible alternatives or are supported by other lines of evidence (e.g., animal studies or mode of action information). Evidence includes replicated and consistent high-quality studies by multiple investigators.
Likely To Be A Causal Relationship	Evidence is sufficient to conclude that a causal relationship is likely to exist with relevant pollutant exposures, but important uncertainties remain. That is, the pollutant has been shown to result in health effects in studies in which chance and bias can be ruled out with reasonable confidence but potential issues remain. For example: (a) observational studies show an association, but co-pollutant exposures are difficult to address and/or other lines of evidence (controlled human exposure, animal, or mode of action information) are limited or inconsistent; or (b) animal toxicological evidence from multiple studies from different laboratories that demonstrate effects, but limited or no human data are available. Evidence generally includes replicated and high-quality studies by multiple investigators.
Suggestive Of A Causal Relationship	Evidence is suggestive of a causal relationship with relevant pollutant exposures, but is limited because chance, bias, and confounding cannot be ruled out. For example, at least one high-quality epidemiologic study shows an association with a given health outcome but the results of other studies are inconsistent.
Inadequate To Infer A Causal Relationship	Evidence is inadequate to determine that a causal relationship exists with relevant pollutant exposures. The available studies are of insufficient quantity, quality, consistency or statistical power to permit a conclusion regarding the presence or absence of an effect.
Not Likely To Be A Causal Relationship	Evidence is suggestive of no causal relationship with relevant pollutant exposures. Several adequate studies, covering the full range of levels of exposure that human beings are known to encounter and considering susceptible populations, are mutually consistent in not showing an effect at any level of exposure.

(Adapted from U.S. EPA, 2009)

OZONE

Ozone is a gaseous air pollutant that is a highly reactive compound and a strong oxidizing agent. When ozone comes into contact with the respiratory tract, it can react with tissues and cause damage in the airways. Ozone, or its reaction products, can penetrate into the gas exchange region of the deep lung. Both short-term and long-term exposures to ozone have been linked to respiratory effects. Ozone from man-made sources is formed by photochemical reactions when pollutants such as volatile organic compounds, nitrogen oxides, and carbon monoxide react with sunlight. The main sources of such ozone precursors are discussed in detail in the draft 2016 AQMP Chapter 3. Additionally, a discussion of the spatial distribution of ozone is provided in the draft 2016 AQMP Chapter 2.

In 1997, the U.S. EPA established the first federal standard for ozone averaged over 8 hours, at 0.08 ppm. In 2005, the California Air Resources Board (CARB) established standards of 0.09 ppm averaged over one hour and at 0.070 ppm averaged over eight hours. In 2008, the U.S. EPA lowered the federal standard for ozone to 0.075 ppm averaged over eight hours. On the basis of recent evaluations of ozone health effects, U.S. EPA's Clean Air Scientific Advisory Committee recommended in 2015 that the National Ambient Air Quality Standard (NAAQS) for ozone be reduced and recommended a range in which 0.070 ppm would be the upper limit. In 2015, the U.S. EPA concluded that the current national standard was not adequate to protect public health and lowered the 8-hour ozone standard to 0.070 ppm (U.S. EPA 2015b). While the federal standards must be attained within a specified time frame, the California standards do not have specific defined deadlines, but must be attained by the earliest practicable date.

The table below provides the overall U.S. EPA staff conclusions on the causality of short-term (i.e. hours, days, weeks) and long-term (i.e. months, years) ozone health effects for the health outcomes evaluated (U.S. EPA 2013b).

TABLE I-2

Summary of U.S. EPA's Causal Determinations for Health Effects of Ozone

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Respiratory Effects	Causal relationship
Cardiovascular Effects	Likely to be a causal relationship
Central Nervous System Effects	Suggestive of a causal relationship
Effects on Liver and Xenobiotic Metabolism	Inadequate to infer a causal relationship
Effects on Cutaneous and Ocular Tissues	Inadequate to infer a causal relationship
Mortality	Likely to be a causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Respiratory Effects	Likely to be a causal relationship
Cardiovascular Effects	Suggestive of a causal relationship
Reproductive and Developmental Effects	Suggestive of a causal relationship
Central Nervous System Effects	Suggestive of a causal relationship
Cancer	Inadequate to infer a causal relationship
Mortality	Suggestive of a causal relationship

(From U.S. EPA, 2013a Table 1-1)

Short-Term Exposure Effects of Ozone

The adverse effects reported with short-term ozone exposure are greater with increased activity because activity increases the breathing rate, the depth of the breaths, and the volume of air reaching the lungs, resulting in an increased amount of ozone reaching deeper into the lungs. Children are considered to be a particularly vulnerable population to air pollution effects because their lungs are still growing, they typically spend more time outdoors, are generally more physically active, and have a higher ventilation rate relative to their body weight, compared to adults (U.S. EPA 2013b).

A number of adverse health effects associated with ambient ozone levels have been identified from laboratory and epidemiological studies (American Thoracic Society 1996b; U.S. EPA 2006; U.S. EPA 2013b). These include increased respiratory symptoms, damage to cells of the respiratory tract,

decrease in lung function, increased susceptibility to respiratory infection, an increased risk of hospitalization, and increased risk of mortality. For short-term ozone exposures, the U.S. EPA determined in the most recent ISA that the evidence supports a causal relationship for respiratory effects, and a likely causal relationship for cardiovascular effects and mortality.

In the laboratory, exposure of human subjects to low levels of ozone causes reversible decreases in lung function as assessed by various measures such as respiratory volumes, airway resistance and reactivity, irritative cough and chest discomfort. The results of several studies where human volunteers were exposed to ozone for 6.6 hours at levels between 0.04 and 0.12 ppm were summarized by Brown (Brown et al. 2008). As shown in Figure I-1, there is an increasing response on lung function with increasing exposure levels in moderately exercising subjects. A study published after the analysis by Brown et al. exposed healthy young adults for 6.6 hours under intermittent moderate exercise to each of the following: filtered air, and ozone at 0.06, 0.07, 0.08, and 0.087 ppm (Schelegle et al. 2009). The study found decreases in lung function (forced expiratory volume in 1 second, or FEV1) with each of the different levels of ozone exposure, although the decrease in lung function at 0.06 ppm was not statistically different from exposure to filtered air. Lung function (FEV1) decreases were approximately 5 percent, 7 percent, and 11 percent at ozone exposure levels of 0.07, 0.08, and 0.087 ppm. A more recent study (Kim et al. 2011) exposed young healthy adults to ozone in the range of 0.06 to 0.10 ppm for 6.6 hours while engaging in intermittent moderate exercise, and found that the study participants exhibited an approximately 2 percent reduction in lung function (FEV1) and an increase in pulmonary inflammation after exposure to ozone at the 0.06 ppm concentration.

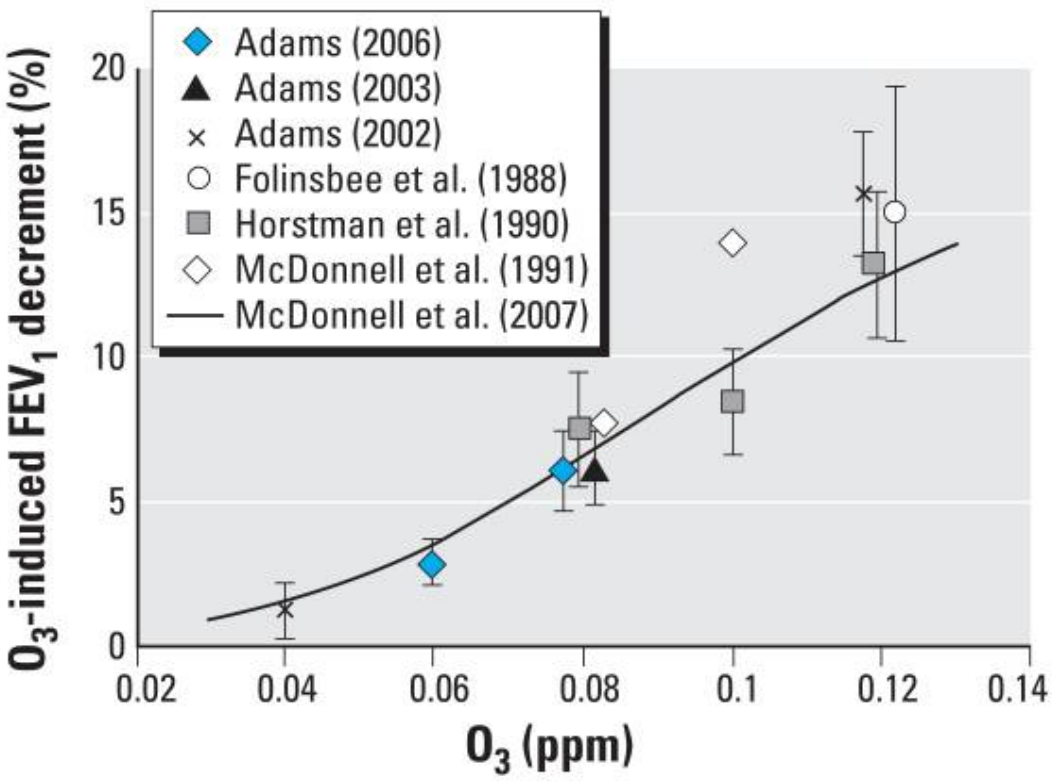


FIGURE I-1

Comparison of mean ozone-induced decrements in lung function following 6.6 hours of ozone exposure. Error bars represent the standard error. McDonnell et al. (2007) was a summary of results from several studies, and is represented by the line in the graph. (From: (Brown et al. 2008))

Some changes in lung function (volume and airway resistance changes) observed after study participants were exposed to ozone only once exhibit attenuated responses or a reduction in magnitude of responses when exposures are repeated, although there were a range of individual human responses observed, including some non-responders (Linn et al. 1988). Although it has been argued that the observed shift in response is evidence of a probable development of tolerance, it appears that while functional changes may exhibit attenuation, biochemical and cellular changes which may be associated with episodic and chronic exposure effects may not exhibit an attenuation. That is, internal damage to the respiratory system may continue with repeated ozone exposures, even if externally observable effects (chest symptoms and reduced lung function) disappear. An additional argument against toleration is that after several days or weeks without ozone exposures, the responsiveness (in terms of lung function as well as symptoms) returns, which is evidence that any tolerance developed is relatively short-lived (U.S. EPA 2013b).

Laboratory studies have also compared the degree of lung function change seen in healthy individuals versus asthmatics and those with chronic obstructive pulmonary disease (COPD). In several

laboratory studies of individuals with COPD, the percent decreases in lung function from short-term ozone exposures ≤0.30ppm among patients with COPD generally did not differ from the lung function decrements experienced by healthy patients (Linn et al. 1982; Solic et al. 1982; Linn et al. 1983; Kehrl et al. 1985). That finding, however, may not accurately reflect the true impact of exposure on these respiration-compromised individuals. Since the respiration-compromised group may have lower lung function to begin with, the same total percent change in lung function may represent a substantially greater relative adverse effect overall. Other studies have found that subjects with asthma are more sensitive to the short-term effects of ozone in terms of lung function and inflammatory response, as evidenced by measuring changes in lung function, increased hospitalizations, and emergency room visits for respiratory conditions (U.S. EPA 2013b). This evidence supports the hypothesis that asthmatics are a particularly sensitive population to the health effects of ozone.

In laboratory studies of animals, cellular and biochemical changes associated with respiratory tract inflammation have also been consistently found in the airway lining after low- level exposure to ozone. These changes include an increase in specific cell types and in the concentration of biochemical mediators of inflammation and injury such as Interleukin-1, Interleukin-6, Interleukin-8, Tumor Necrosis Factor α (TNF-α), and fibronectin (Van Bree et al. 2002; Johnston et al. 2007; U.S. EPA 2013b).

In addition to controlled laboratory conditions, epidemiological studies of individuals exercising outdoors, including children attending summer camp, have shown associations of reduced lung function with ozone exposure. There were wide ranges in responses among individuals. U.S. EPA's 2013 ISA indicated that most studies found reductions in lung function (FEV_1) in the range of approximately <1 to 2 percent when standardized to an increase of 0.04 ppm for a 1-hour maximum, an increase of 0.03 ppm for an 8-hour maximum, and an increase of 0.02 ppm for a 24-hour average (U.S. EPA 2013b). Somewhat greater decrements in lung function (4.9 to 7.3 percent) were found in children with asthma who had respiratory infections or were using corticosteroid medication.

Epidemiologic studies have found that increases in short-term ozone levels are associated with impacts on children's respiratory health, including increases in respiratory symptoms in children with asthma, and increased numbers of absences from school. Studies conducted in various cities in the U.S. and in other countries have reported increased respiratory symptoms among children with asthma, including wheeze, cough, difficulty breathing, and chest symptoms/tightness (U.S. EPA 2013b). The Children's Health Study, conducted by researchers at the University of Southern California, followed for several years a cohort of children that live in 12 communities in Southern California with differing levels of air pollution. A publication from this study reported that school absences in fourth graders for respiratory illnesses were positively associated with short-term increases in ambient ozone levels. An increase of 20 ppb (0.02 ppm) ozone was associated with a 63 percent increase in illness-related absence rates and an 83 percent increase in respiratory illnesses (Gilliland et al. 2001). A small panel study of Hispanic children with asthma living in the Huntington Park neighborhood of Los Angeles, California reported that a 10.8 ppb increase in ozone averaged

over 8 hours nearly doubled the odds of having asthma symptoms that interfered with daily activities (Delfino et al. 2003). Despite these studies, and some others linking ozone exposures with school absences, the U.S. EPA concluded that only limited evidence is currently available linking these ozone exposures to respiratory-related school absences (U.S. EPA 2013b).

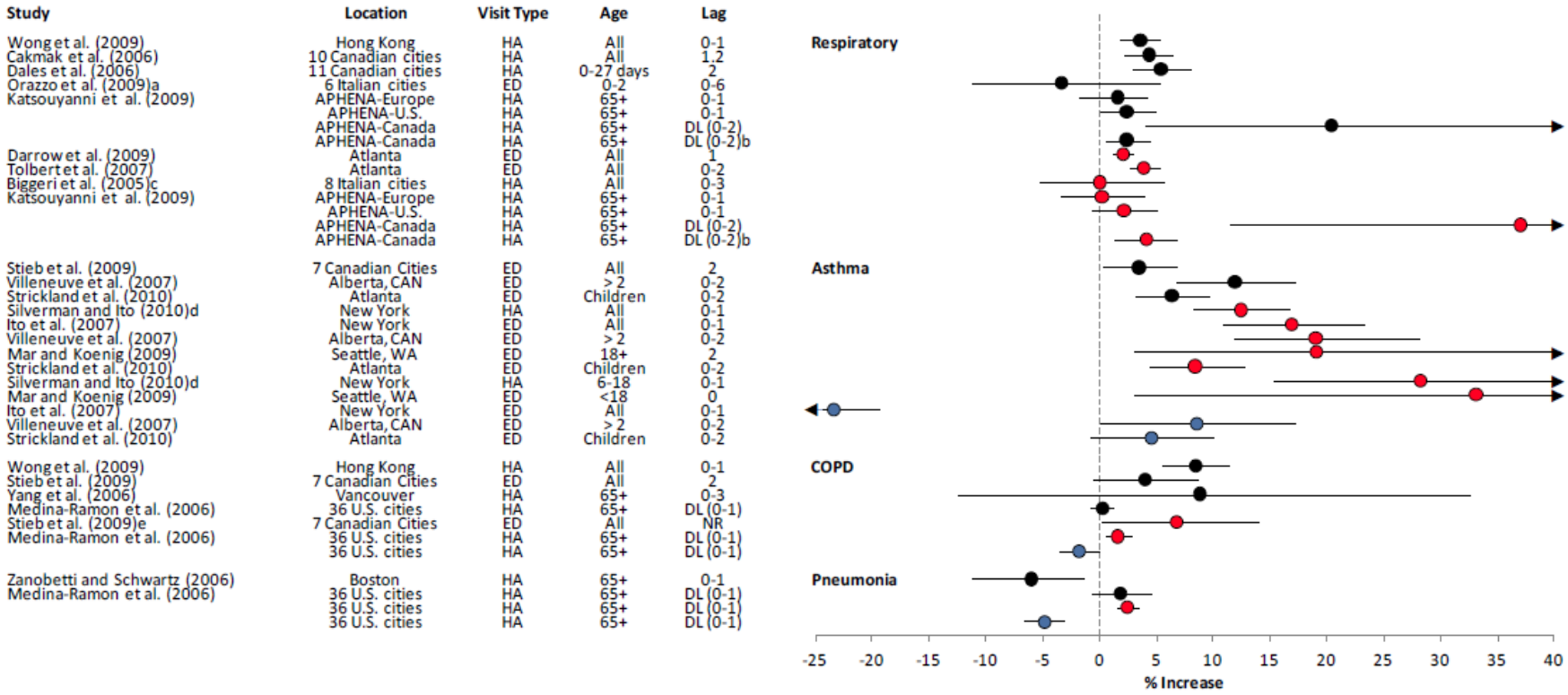
Numerous studies have found associations of short-term ozone levels and hospital admissions and emergency department admissions for respiratory conditions, and the U.S. EPA concluded in the latest ISA that the most recent epidemiological studies conducted in both single cities and multiple cities continue to provide evidence supporting a causal relationship between short-term ozone exposures and respiratory effects (U.S. EPA 2013b). The studies generally found stronger associations for asthma and COPD in the warm season or in the summer months, compared to the cold season, and also provided evidence that children are at greatest risk of ozone-related respiratory health effects. Several of these studies reviewed in the ISA had average ozone concentrations well below 60 ppb averaged over 8 hours and still reported associations with respiratory outcomes. One study of asthma emergency department visits reported ozone effects at concentrations as low as 30 ppb (Strickland et al. 2010). Figure I-2 presents examples of studies regarding all-year and seasonal analysis of ozone exposure and hospital admissions or emergency department visits. This figure illustrates the associations found between ambient ozone exposure and key respiratory outcomes (asthma, COPD and pneumonia), and shows the stronger effects with summertime ozone exposures. Recently, a study in California reported that short-term ozone exposures were associated with emergency department visits for asthma, acute respiratory infections, pneumonia, COPD, and upper respiratory tract infections, with more consistent associations during the warm season (Malig et al. 2016). This California study provides additional supporting evidence for ozone-related respiratory effects.

The potential cardiovascular effects of short-term ozone exposure have been studied in toxicological, human exposure, and epidemiological studies. Controlled human exposure studies have found that ozone exposures produce changes in heart function (as measured by heart rate variability) and increases in biomarkers in the blood for systemic inflammation and oxidative stress. The limited number of toxicological studies on this topic provide evidence of cardiovascular effects. The effects observed include increased heart rate variability, arrhythmias, vascular disease, and inflammation and oxidative stress leading to atherosclerosis, which can lead to tissue damage due to ischemia and reperfusion (i.e. having the blood supply cut off and then restored to the tissues) (U.S. EPA 2013b). The controlled human exposure and toxicological studies provide evidence of cardiovascular effects of ozone, and some plausible mechanisms for these effects. Epidemiological studies, including some recent multi-city studies show relatively consistent associations between short-term ozone exposures and cardiovascular mortality (these studies are discussed further below). However, epidemiological studies do not provide consistent evidence of cardiovascular morbidity with short-term ozone exposures. Studies conducted in the Los Angeles area or in California also do not provide consistent evidence of short-term ozone effects on cardiovascular morbidity. A study of elderly non-smokers in the Los Angeles area with a history of heart disease found no associations between ozone exposure and blood pressure nor ST-segment depression, a measure of cardiac ischemia (Delfino et

al. 2010; Delfino et al. 2011). A Los Angeles-based study of cardiovascular hospital admissions did not find increased risk with ozone exposures (Linn et al. 2000). However, a biomarker study of students at UC Berkeley who spent their summer vacation in either the Los Angeles or San Francisco Bay Area found that ozone exposures over a period of 2 weeks or 1 month were associated with increases in a biomarker of lipid peroxidation, but no association was found for a biomarker of antioxidant capacity (Chen et al. 2007). Lipid peroxidation is an indicator of oxidative stress, which may be triggered by pulmonary inflammation caused by ozone exposure. Given the strong evidence of cardiovascular morbidity from experimental studies and the consistent positive associations reported in epidemiological studies of cardiovascular mortality, but the lack of consistent evidence from epidemiological studies of cardiovascular morbidity, the U.S. EPA determined that there is a likely causal relationship between short-term ozone exposures and cardiovascular effects (U.S. EPA 2013b).

For mortality effects, the U.S. EPA 2013 ISA concluded that there was a likely causal relationship for short-term ozone exposures. This determination is supported by numerous studies have found positive associations between short-term increases in ozone levels and excess risk of mortality from all non-accidental causes, cardiovascular causes, and respiratory causes (Bell et al. 2004; Bell et al. 2005; Huang et al. 2005; Ito et al. 2005; Levy et al. 2005; Bell et al. 2008; Zanobetti et al. 2008). Studies conducted across multiple cities in the U.S. Canada, Europe and Asia reported increased cardiovascular and respiratory mortality risks with increased short-term ozone exposures, and several studies additionally reported increased mortality risk for summer season ozone exposures (Katsouyanni et al. 2009; Samoli et al. 2009; Stafoggia et al. 2010; Wong et al. 2010). Some studies have also demonstrated that these associations persist even when other variables including season and levels of particulate matter are accounted for, indicating that ozone mortality effects may be independent of other pollutants, although there is some variability across studies with regard to the sensitivity of the ozone associations to adjustment for PM (Bell et al. 2004; Huang et al. 2005; Katsouyanni et al. 2009; Stafoggia et al. 2010). With regard to respiratory effects, the substantial evidence supporting a causal relationship between short-term ozone exposures and respiratory morbidity provides strong support for the recent evidence from epidemiological studies linking such exposures to respiratory mortality. For cardiovascular effects, while there is strong evidence linking cardiovascular mortality with short-term ozone exposures, the epidemiological studies of non-fatal outcomes do not provide consistent evidence for a coherent mechanism linking ozone exposures to cardiovascular mortality (U.S. EPA 2013b).

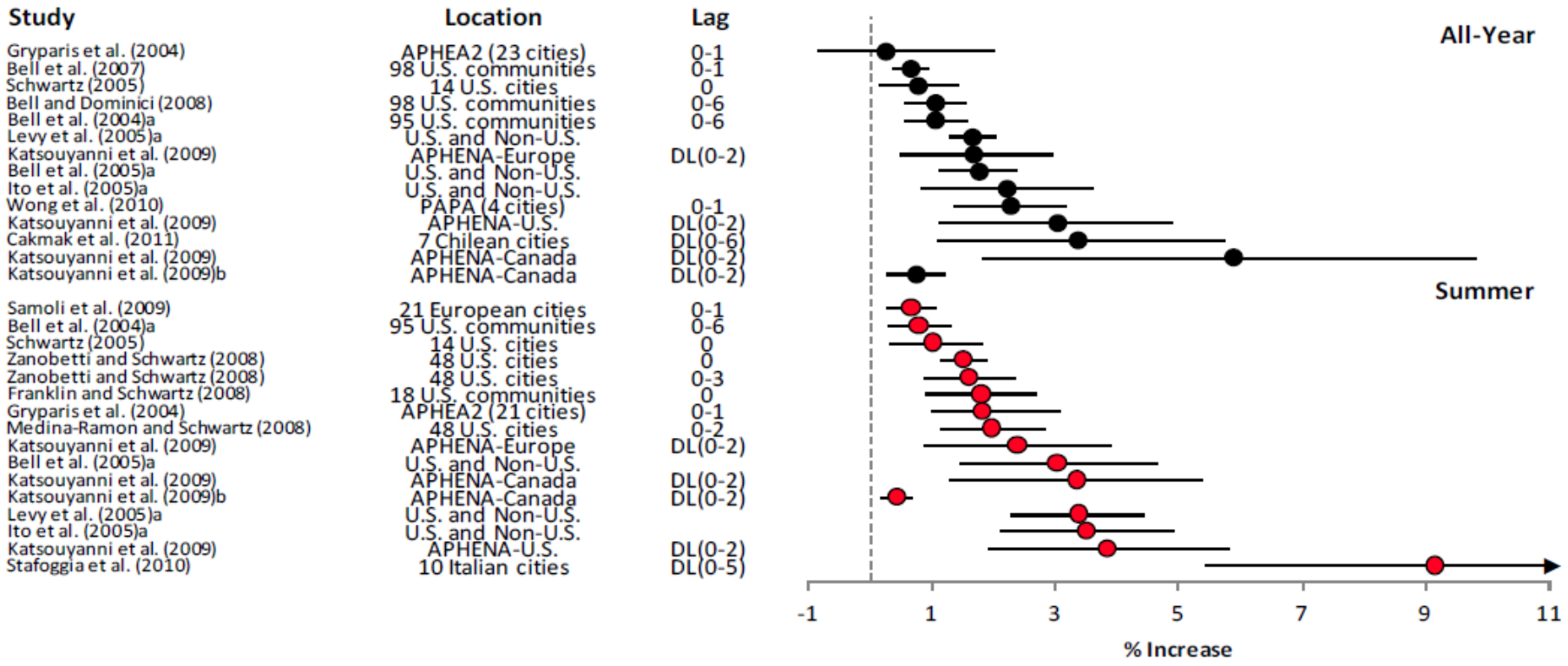
Examples of studies showing the relative change in mortality risks for all-year and summer-only analyses are shown in Figure I-3.



Note: Effect estimates are for a 20 ppb increase in 24-hour; 30 ppb increase in 8-hour max; and 40 ppb increase in 1-hour max O_3 concentrations. HA=hospital admission; ED=emergency department. Black=All-year analysis; Red=Summer only analysis; Blue=Winter only analysis. (From (U.S. EPA 2013b) Figure 6-19)

FIGURE I-2

Change in respiratory-related hospital admission and emergency department visits in studies that presented all-year and/or seasonal results.



Note: Effect estimates are for a 40 ppb increase in 1-hr max, 30 ppb increase in 8-hr max, and 20 ppb increase in 24-hr average O_3 concentrations. (From (U.S. EPA 2013b) Figure 6-27)

FIGURE I-3

Summary of mortality risk estimates for short-term O_3 exposure and all-cause (nonaccidental) mortality.

Long-Term Exposure Effects of Ozone

The U.S. EPA 2013 ISA for Ozone concluded that there was a likely causal relationship between long-term ozone exposure and respiratory effects (U.S. EPA 2013b). Evidence supporting this determination comes from epidemiological and toxicological studies, particularly studies of asthma and related symptoms, asthma-related hospital admissions, lung function, lung inflammation and oxidative stress. Other health effects of long-term ozone exposure were determined to have "suggestive" or "inadequate" evidence of causality, although the few studies of respiratory mortality provide support to the respiratory health effects of ozone.

The Adventist Health and Smog Study (AHSMOG) and Children's Health Study cohorts are two large long-term studies conducted in California that examined several aspects of long-term ozone effects in adults and children, respectively. Several of these studies focused on asthma development and exacerbation. The AHSMOG study included adult, non-smoking, non-Hispanic white Seventh Day Adventists living in California. The 10-year follow-up AHSMOG study reported that a 10 ppb increase in annual mean ozone exposures increased the risk of asthma development in males by three-fold (relative risk 3.12, 95 percent confidence interval: 1.16, 5.85), but no effect was seen among females (relative risk 0.94, 95 percent confidence interval: 0.65, 1.34) (Greer et al. 1993). The 15-year follow-up AHSMOG study used an ozone metric focusing on 8-hour average exposures, and reported that a 10 ppb increase was associated with a 30 percent increased risk of developing asthma in males (relative risk 1.31, 95 percent confidence interval: 1.01, 1.71), and these effects persisted even after accounting for other pollutants (McDonnell et al. 1999). The latter study also found no effect in females, although this may reflect a greater potential for misclassification of air pollution exposure in females compared to males, due to different time-activity patterns resulting in greater time spent outdoors among males (U.S. EPA 2013b). In the Children's Health Study, among children living in 12 Southern California communities with high ozone concentrations, the relative risk of developing asthma in children playing three or more sports was found to be over three times higher than in children playing no sports (McConnell et al. 2002). The high ozone communities had a 4-year mean daytime ozone concentration of 59.6 ppb, compared to 40.0 ppb for the low-ozone communities. These findings indicate that new cases of asthma in children may be associated with performance of heavy exercise in communities with high levels of ozone. While it has long been known that air pollution can exacerbate symptoms in individuals with preexisting respiratory disease, this is among the first studies that indicate ozone exposure may contribute to asthma onset. However, three more recent Southern California studies did not find an association between ozone exposures and childhood asthma incidence, but did report increased risks of asthma onset with higher exposures to particulate matter or NO_2 (Islam et al. 2007; McConnell et al. 2010; Nishimura et al. 2013). These studies did not examine whether genetic factors may have played a role in making some people more susceptible than others to the respiratory effects of ozone exposure. Some analyses from the Children's Health Study identified specific genetic variants that, when combined with ambient ozone exposure, either increase or decrease the risk of developing asthma (Islam et al. 2008; Islam et al. 2009; Salam et al. 2009). These genetic variants are involved with antioxidant and/or anti-

inflammatory pathways, and are likely involved in key elements of asthma development (U.S. EPA 2013b).

Other studies examined the impact of long-term ozone exposures and respiratory symptoms, particularly among asthmatics. Studies have linked long-term ozone exposures to increased risk of having poorly-controlled asthma, increased asthma symptoms, and respiratory-related school absences (Gilliland et al. 2001; Akinbami et al. 2010; Jacquemin et al. 2012). An analysis from the CHS found no association between long-term ozone exposures and chronic lower respiratory tract symptoms, and another found an increased risk of bronchitic symptoms within a community, although the association was reduced when accounting for other pollutants (McConnell et al. 1999; McConnell et al. 2003). However, two studies from the CHS demonstrated gene-environment interactions for genes that are involved in inflammation or antioxidant pathways. One study found that asthmatic children with a particular genetic variant that reduces expression of the cytokine TNF-α (as part of an inflammatory response) had reduced risk of bronchitic symptoms for children in low-ozone communities, but not for children in high-ozone communities (Lee et al. 2009). A second study found that a particular genetic variant reduced the risk of respiratory-related school absences among children living in communities with high levels of ozone (defined in this study as being above the median value of 46.9 ppb) (Wenten et al. 2009).

Results of epidemiologic studies of hospital admissions and emergency department visits support the relationship between ozone exposure and respiratory effects. In a 2007 study conducted in Southern California, an increased risk of having poorly-controlled asthma was associated with living in areas above the 90th percentile ozone level (28.7 ppb, annual average) among men and elderly individuals (Meng et al. 2007). A study in the South Coast Air Basin found that ozone was associated with increased hospital discharges for asthma among children (Moore et al. 2008). Another study in the South Coast Air Basin looked at infants hospitalized for bronchiolitis. This study found a reduced risk of infant bronchiolitis hospitalization with increased ozone exposure, although there was no association for ozone when accounting for the effect of PM2.5, which was positively associated with this respiratory outcome (Karr et al. 2007). A study of people with asthma was conducted in the San Joaquin Valley of California, and found that a 10 ppb increase in ozone exposures averaged over one year increased the odds of asthma-related hospital admissions and emergency department visits by approximately 50 percent, and the odds of asthma symptoms among adults by about 40 percent (Meng et al. 2010). Studies conducted in other locations have also reported increases in asthma hospitalizations (U.S. EPA 2013b).

Some animal studies show results that indicate possible chronic effects including functional and structural changes of the lung. However, morphological, developmental, and immunological differences make it difficult to apply these results to humans experiencing ambient exposures. These changes observed in airway responsiveness provide support for the long-term effects of ozone in asthma development or exacerbation (U.S. EPA 2013b). However, epidemiologic studies examining long-term ozone exposures and lung function deficits have reported mixed results. For example, an analysis of the first CHS cohort found that PM2.5 and NO_2 exposures were associated with decreased

lung function, but did not find an association for ozone (Gauderman et al. 2004). An autopsy study involving Los Angeles County residents who died between ages 14 and 25 years due to violent death, although conducted many years ago when pollutant levels were higher than currently measured, provided supportive evidence of lung tissue damage (structural changes), which the authors suggested were attributable to air pollution (Sherwin 1991), although many uncertainties remain about the extent to which air pollution explains the findings.

Unlike short-term ozone exposures, there is limited evidence linking long-term ozone exposures with mortality. A large study based on the American Cancer Society Cancer Prevention Study II (CPS-II) cohort included 96 metropolitan statistical areas in the U.S., and reported that a 10 ppb increase in daily maximum 1-hour ozone concentrations averaged between April and September (warm season) was associated with a relative risk of 1.040 (95 percent confidence interval: 1.010, 1.067) for respiratory deaths, but no association with cardiovascular deaths (Jerrett et al. 2009). A U.S. study of Medicare enrollees reported increased risk of mortality with higher ozone exposures averaged over the warm season, among patients who had previously been hospitalized for congestive heart failure, myocardial infarction, COPD and diabetes (Zanobetti et al. 2011). A recent large-scale study found increased risk of all-cause, cardiovascular, and respiratory mortality with long-term ozone exposures, even after accounting for the effects of PM2.5 and NO_2, as well as other behavioral and demographic factors, including smoking (Turner et al. 2016). Other studies have found temperature to be an important potential risk factor for mortality, and may confound or modify the associations between air pollution exposure and mortality (Basu et al. 2002; Cheng et al. 2008). The Turner 2016 study examined the role of temperature, and found that the associations between ozone and mortality differed based on average daily maximum temperatures (Turner et al. 2016). While the U.S. EPA determination in the latest ISA was that the evidence was suggestive of long-term ozone exposure causing mortality, the studies of respiratory mortality support the evidence for the respiratory effects of ozone exposure, for which U.S. EPA has concluded there is a causal relationship.

For non-respiratory health endpoints, the U.S. EPA causal determinations were “suggestive of a causal relationship” (for cardiovascular, reproductive and developmental, central nervous system and mortality effects) or “inadequate to infer a causal relationship” (for cancer). Some studies conducted in California have examined reproductive or developmental effects, including birth defects, low birth weight or birth weight reductions, stillbirth and autism (Ritz et al. 2002; Ritz et al. 2007; Morello-Frosch et al. 2010; Becerra et al. 2013; Mobasher et al. 2013; Trasande et al. 2013; Laurent et al. 2014; Green et al. 2015; Symanski et al. 2016). Other recent studies have examined cardiovascular effects (Koken et al. 2003; Ensor et al. 2013; Rodopoulou et al. 2014). While many of these studies have reported associations with ambient ozone levels, the most recent U.S. EPA determination in 2013 was that the evidence was suggestive of a causal determination, but did not yet rise to a higher level.

Sensitive Populations for Ozone-Related Health Effects

A number of population groups are potentially at increased risk for ozone exposure effects. In the most recent ISA for ozone in 2013, the U.S. EPA has identified several populations as having adequate evidence for increased risk from ozone exposures. These include children, older adults, outdoor workers, and individuals with asthma, certain variations in genes related to oxidative metabolism or inflammation, or reduced intake of certain nutrients such as Vitamins C and E (Kreit et al. 1989; Horstman et al. 1995; Sienra-Monge et al. 2004; Romieu et al. 2012; U.S. EPA 2013b; Bell et al. 2014). There is suggestive evidence for other potential factors, such as a person's sex, socioeconomic status, and obesity (U.S. EPA 2013b). Some other factors that could affect sensitivity to ozone have also been studied; however, there was inadequate evidence to conclude whether these were risk factors for ozone sensitivity. The table below summarizes the evidence for factors affecting sensitivity to ozone from the 2013 ISA for ozone.

TABLE I-3

Summary of Evidence for Potential Increased Susceptibility to Ozone-Related Health Effects

Evidence Classification	Potential At Risk Factor
Adequate evidence	Genetic factors Asthma Children Older adults Diet Outdoor worker
Suggestive evidence	Sex SES Obesity
Inadequate evidence	Influenza/infection COPD Cardiovascular disease Diabetes Hyperthyroidism Race/ethnicity Smoking Air conditioning use
Evidence of no effect	--

From (U.S. EPA 2013b) Table 8-6

As previously mentioned, one group that has been recognized as being particularly sensitive to the effects of ozone is young children with asthma, because their lungs are still developing, their potential for increased exposure due to time spent exercising outdoors, and their high ventilation rates relative to body weight (U.S. EPA 2013b). Some factors that may contribute to the increased sensitivity among people with asthma include having an altered innate immune function and factors that decrease their antioxidant defenses (Alexis et al. 2014). Ozone creates secondary oxidation products that are electrophilic, and certain genetic factors influence a person's ability to metabolize

these electrophiles, which can affect respiratory function (U.S. EPA 2013b). Asthma exacerbations are more prevalent and severe in young boys than in girls, but the evidence on whether boys are more susceptible than girls to the effects of air pollution on asthma symptoms is not consistent (Guarnieri et al. 2014).

Summary – Ozone Health Effects

In summary, outdoor ozone exposures have been associated with a range of negative human health effects. The strongest evidence for negative health impacts are on the respiratory system, and are measured by decreased lung function performance and increased cell injury. In addition, the 2013 ISA also concluded that there was a likely causal relationship between short-term ozone exposures and cardiovascular effects (such as changes in heart function, and increased systemic inflammation and oxidative stress) as well as respiratory mortality. Although the specific mechanisms of action for ozone effects on the various health endpoints have not been fully identified, there is evidence of the important roles of oxidation of key enzymes and proteins, inflammatory responses, changes in immune response, and modification and activation of neural reflex pathways (U.S. EPA 2013b).

The previous U.S. EPA review of ozone in the 2006 Air Quality Criteria Document (AQCD) had already concluded that there was clear, consistent evidence that acute ozone exposure is causally associated with respiratory effects (U.S. EPA 2006). Additionally, the 2006 AQCD for ozone concluded that the evidence was highly suggestive of ozone causing mortality, but that there was limited evidence for ozone causing cardiovascular effects. In the 2013 ISA, the U.S. EPA cited that several lines of evidence provide support for the respiratory effects of ozone, including human exposure studies, epidemiology and toxicology, which led to the conclusion that there was a causal relationship with short-term ozone exposures, and a likely causal relationship with long-term ozone exposures. In humans, respiratory effects were detected in laboratory studies at 0.06 ppm ozone concentrations, and in epidemiological studies with average ozone concentrations as low as 0.03 ppm (Strickland et al. 2010; Kim et al. 2011). Some populations are more sensitive to the health effects of ozone than others, including elderly persons, children, outdoor workers and persons with asthma.

PARTICULATE MATTER

Airborne particulates are a complex group of pollutants that vary in physical, chemical, and biological dimensions. Physically, particles can vary by size, surface area and roughness, shape, and mass. Chemically, they vary by chemical composition. Biologically, they can vary by toxicity. In addition, particles vary by source, and can come from anthropogenic (man-made, such as from combustion of fuels, or frictional abrasion) or “natural” (plants – for example, pollens and spores) origins. The composition of particulate matter can vary across sub-regions, and a description of the spatial differences in PM composition can be found in the draft 2016 AQMP Chapter 2 and Appendix II.

The National Ambient Air Quality Standard for particulate matter was established in 1971, and set limits on the ambient level of Total Suspended Particulates (TSP). In 1987, the national particulate matter standards were revised to focus on particles sized 10 µm (micrometers) aerodynamic diameter and smaller. These can be inhaled and deposited throughout the upper and lower

respiratory system, depositing in both airways and gas-exchange areas of the lung. These particles are referred to as PM10. U.S. EPA initially promulgated ambient air quality standards for PM10 of 150 μg/m^3 averaged over a 24-hour period, and 50 μg/m^3 for an annual average. U.S. EPA has since rescinded the annual PM10 standard, but kept the 24-hour standard.

As more health research data has become available, concerns have centered on smaller and smaller particles. Additional focus has been placed on particles having an aerodynamic diameter of 2.5 μm or less (PM2.5). A greater fraction of particles in this size range can penetrate and deposit deep in the lungs. The U.S. EPA established standards for PM2.5 in 1997 and in 2006 lowered the air quality standards for PM2.5 to 35 μg/m^3 for a 24-hour average and reaffirmed 15 μg/m^3 for an annual average standard. There was considerable controversy and debate surrounding the review of particulate matter health effects and the consideration of ambient air quality standards (Kaiser 1997; Vedal 1997) when the U.S. EPA promulgated the initial PM2.5 standards in 1997. In 2002, the California Air Resources Board adopted an air quality standard for PM2.5 at a level of 12 μg/m^3, in the form of an annual average.

Since that time, additional studies have been published and some of the key studies were closely scrutinized and the data reanalyzed by additional investigators. The reanalyses confirmed the original findings, and there are now additional data confirming and extending the range of the adverse health effects of PM2.5 exposures. In 2012, the U.S. EPA revised the PM2.5 annual average standard to 12.0 μg/m^3 (U.S. EPA 2013c). This federal standard is set at same level as the current California PM2.5 annual standard, although the California standard does not have a specified attainment date. In 2014, the U.S. EPA announced it is preparing an ISA as part of the review of the federal PM standards (the process is described briefly in the draft AQMP Chapter 8). The draft AQMP Chapter 2 and Appendix II provide additional information about how PM levels in the South Coast Air Basin compare to the federal and state standards.

There have been several reviews of the health effects of ambient particulate matter (American Thoracic Society 1996a; Brunekreef et al. 2002; U.S. EPA 2004; U.S. EPA 2009; Brook et al. 2010). In addition, the California Air Resources Board (CARB) and the Office of Environmental Health and Hazard Assessment (OEHHA) have reviewed the adequacy of the California Air Quality Standards for Particulate Matter (California Air Resources Board and Office of Environmental Health Hazard Assessment 2002).

The major types of health effects associated with particulate matter include:

- Increased mortality
- Exacerbation of respiratory disease and of cardiovascular disease as evidenced by increases in:
    - Respiratory symptoms, exacerbation of asthma
    - Cardiovascular symptoms, non-fatal myocardial infarction
    - Hospital admissions and emergency room visits

- Physician office visits
- School absences

- Adverse birth outcomes
- Effects on lung function
- Changes in lung morphology

In the 2009 Integrated Science Assessment for Particulate Matter, the U.S. EPA presented conclusions on the particulate matter causal determination of several health effects based on an updated review of scientific studies (U.S. EPA 2009). The conclusions are presented separately for particulates in the size range of 2.5 to 10 micrometers (µm) in aerodynamic diameter (PM10-2.5, often referred to as the coarse fraction) and those ≤2.5 µm (PM2.5, or fine particles). Of note, there is currently no federal or California standard for PM10-2.5, although a PM10 standard remains in effect. These conclusions are depicted in the following tables.

TABLE I-4

Summary of U.S. EPA's Causal Determinations for Health Effects of PM10-2.5

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular effects	Suggestive of a causal relationship
Respiratory effects	Suggestive of a causal relationship
Mortality	Suggestive of a causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular effects	Inadequate to infer a causal relationship
Respiratory effects	Inadequate to infer a causal relationship
Mortality	Inadequate to infer a causal relationship
Reproductive and developmental	Inadequate to infer a causal relationship

(From (U.S. EPA 2009) Table 2-3 and Section 2.3.4)

There are also differences in the composition and sources of particles in the different size ranges that may have implications for health effects. The particles in the coarse fraction (PM10-2.5) are mostly produced by mechanical processes. These include automobile tire wear, industrial processes such as cutting and grinding, and resuspension of particles from the ground or road surfaces by wind and human activities, such as agricultural, mining, and construction operations, which may be particularly important in rural areas.

TABLE I-5

Summary of U.S. EPA's Causal Determinations for Health Effects of PM2.5

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular effects	Causal relationship
Respiratory effects	Likely to be a causal relationship
Central nervous system	Inadequate to infer a causal relationship
Mortality	Causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular effects	Causal relationship
Respiratory effects	Likely to be a causal relationship
Mortality	Causal relationship
Reproductive and developmental	Suggestive of a causal relationship
Cancer, Mutagenicity, Genotoxicity	Suggestive of a causal relationship

(From (U.S. EPA 2009) Tables 2-1 and 2-2)

In contrast, particles smaller than 2.5 μm are mostly derived from combustion sources, such as automobiles, trucks, and other vehicle exhaust, as well as from stationary combustion sources. The particles are either directly emitted or are formed in the atmosphere from gases that are emitted. Components from material in the earth's crust, such as dust, are also present, with the amount varying in different locations.

Attention to another range of very small particles has been increasing over the last several years. These are generally referred to as "ultrafine" particles, with diameters of 0.1 μm or less. Ultrafine particles are mainly composed of particles from fresh emissions of combustion sources, but are also formed in the atmosphere by condensation of vapors that are emitted or by chemical or photochemical reactions with other contaminants in the air.

Ultrafine particles have relatively short half-lives (minutes to hours) and the particle size rapidly grows through condensation and coagulation processes into particles within the PM2.5 size range. Ultrafine particles are garnering interest since a limited number of epidemiological and some laboratory studies, though not all, indicate that their toxicity may be higher on a mass basis than larger particles. There is also evidence that these small particles, or toxic components carried on their surface, can translocate from the lung to the blood and to other organs of the body, or through the olfactory bulb into the brain (U.S. EPA 2009). Currently, there are no federal or California

standards for ultrafine particles. As such, the health effects of ultrafine particles is discussed in a separate section following the discussion of PM10 and PM2.5.

The current federal and California standards for particulate matter are listed in Table I-6.

TABLE I-6

Ambient Air Quality Standards for Particulate Matter

STANDARD	FEDERAL	CALIFORNIA
PM10 24-Hour average	150 μg/m^3	50 μg/m^3
PM10 Annual Average	--	20 μg/m^3
PM2.5 24-Hour Average	35 μg/m^3	--
PM2.5 Annual Average	12 μg/m^3	12 μg/m^3

Short-Term Exposure Effects of PM

Epidemiological studies have provided evidence for most of the effects listed above. In an extensive report focusing on the history of particulate matter research, the U.S. EPA reviewed several well-conducted studies that reported an association between mortality and increased daily or several-day-average concentrations of PM10 (U.S. EPA 2004). In addition, excess mortality and morbidity are reported in many studies involving communities across the U.S. as well as in Europe, Asia, and South America (U.S. EPA 2009; Lu et al. 2015; Shah et al. 2015; Cai et al. 2016), although there are some studies that show no effect for the specific exposures and outcomes evaluated (Milojevic et al. 2014; Wang et al. 2015; Zu et al. 2016). While there were some studies conducted in California, the importance of assessing results from studies from many different locations around the world should not be understated. The repeatability and consistency of results across many locations strengthens the weight of evidence in the determination of causality.

A review and analysis of epidemiological literature for acute adverse effects of particulate matter was published by the American Thoracic Society in 1996, where several adverse effects were listed as associated with daily PM10 exposures (Table I-7). The review also reported that individuals who are elderly or have preexisting lung or heart disease are more susceptible than others to the adverse effects of PM10 (American Thoracic Society 1996a).

TABLE I-7

Combined Effect Estimates of Daily Mean Particulate Pollution (PM10)

	% CHANGE IN HEALTH INDICATOR PER EACH 10 µg/m^3 INCREASE IN PM10
Increase in Daily Mortality	
Total deaths	1.0
Respiratory deaths	3.4
Cardiovascular deaths	1.4
Increase in Hospital Usage (all respiratory diagnoses)	
Admissions	1.4
Emergency department visits	0.9
Exacerbation of Asthma	
Asthmatic attacks	3.0
Bronchodilator use	12.2
Emergency department visits*	3.4
Hospital admissions	1.9
Increase in Respiratory Symptom Reports	
Lower respiratory	3.0
Upper respiratory	0.7
Cough	2.5
Decrease in Lung Function	
Forced expiratory volume	0.15
Peak expiratory flow	0.08

* One study only
(From: (American Thoracic Society 1996a))

Since then, many more recent studies have provided additional evidence that excess mortality and morbidity are associated with short-term exposure to PM10 and PM2.5 (Pope et al. 2006).

Estimates of mortality effects from studies of PM10 exposures range from 0.3 to 1.7 percent increase for a 10 µg/m^3 increase in PM10 levels. The National Morbidity, Mortality, and Air Pollution Study (NMMAPS), a study of 20 of the largest U.S. cities, determined a combined risk estimate of about a 0.5 percent increase in total mortality for a 10 µg/m^3 increase in PM10 (Samet et al. 2000a). This

study also analyzed the effects of gaseous co-pollutants. When the gaseous pollutants were included in the analyses, the estimated associations between PM10 and mortality remained, though they were somewhat reduced. These results suggest that the effects reported in the study are likely due to the particulate exposures; they cannot readily be explained by coexisting weather stresses or other pollutants.

An expansion of the NMMAPS study to 90 U.S. cities also reported association with PM10 levels and mortality (Samet et al. 2000b; Health Effects Institute 2003). After the study was published, it was discovered that some of the study analyses had been performed with incorrect default values. The strong positive association between acute PM10 exposure and mortality remained, both upon reanalysis using revised software and using alternative modeling approaches (Dominici et al. 2002; Health Effects Institute 2003).

Studies of short-term exposures to PM2.5 have also found associations with increases in mortality. The NMMAPS study conducted a national analysis of PM2.5 mortality association for 1999-2000. The risk estimates were 0.29 percent for all-cause mortality and 0.38 percent for cardio-respiratory mortality (Dominici et al. 2007). In its 2009 review, U.S. EPA determined that estimates for PM2.5 generally are in the range of 0.29 to 1.21 percent increase in total deaths per 10 $\mu g/m^3$ increase in 24-hour PM2.5 levels. The estimates for cardiovascular related mortality range from 0.03 to 1.03 percent per 10 $\mu g/m^3$, and for respiratory mortality estimates range from 1.01 to 2.2 percent per 10 $\mu g/m^3$ 24-hour PM2.5 (U.S. EPA 2009). Figure I-4 shows a summary of U.S. and Canadian studies of mortality and short-term PM2.5 exposures, which shows that the most consistent positive associations were seen with cardiovascular and all-cause deaths. Positive associations for respiratory deaths were also seen in several of these studies, although the precision of the estimates for respiratory deaths was lower relative to that of all-cause or cardiovascular deaths.

Several studies have attempted to assess the relative importance of particles smaller than 2.5 µm and those between 2.5 µm and 10 µm (PM10-2.5). While some studies report that PM2.5 levels are better predictors of mortality effects, others suggest that PM10-2.5 is also important. Most of the studies found higher mortality associated with PM2.5 levels than with PM10-2.5. For example, a study of six cities in the U.S. found that particulate matter less than 2.5 µm was associated with increased mortality, but that the larger particles were not. In the U.S. EPA review (U.S. EPA 2009), several studies were presented that found associations of PM10-2.5 and mortality. Some of the studies showed differences by region of the U.S. In one study of 47 U.S. cities that had both PM2.5 and PM10 data available to calculate PM10-2.5 as a difference, overall, the study found a significant association between the computed PM10-2.5 and all-cause, cardiovascular, and respiratory mortality. The study also reported differences by season and climate area (Zanobetti et al. 2009).

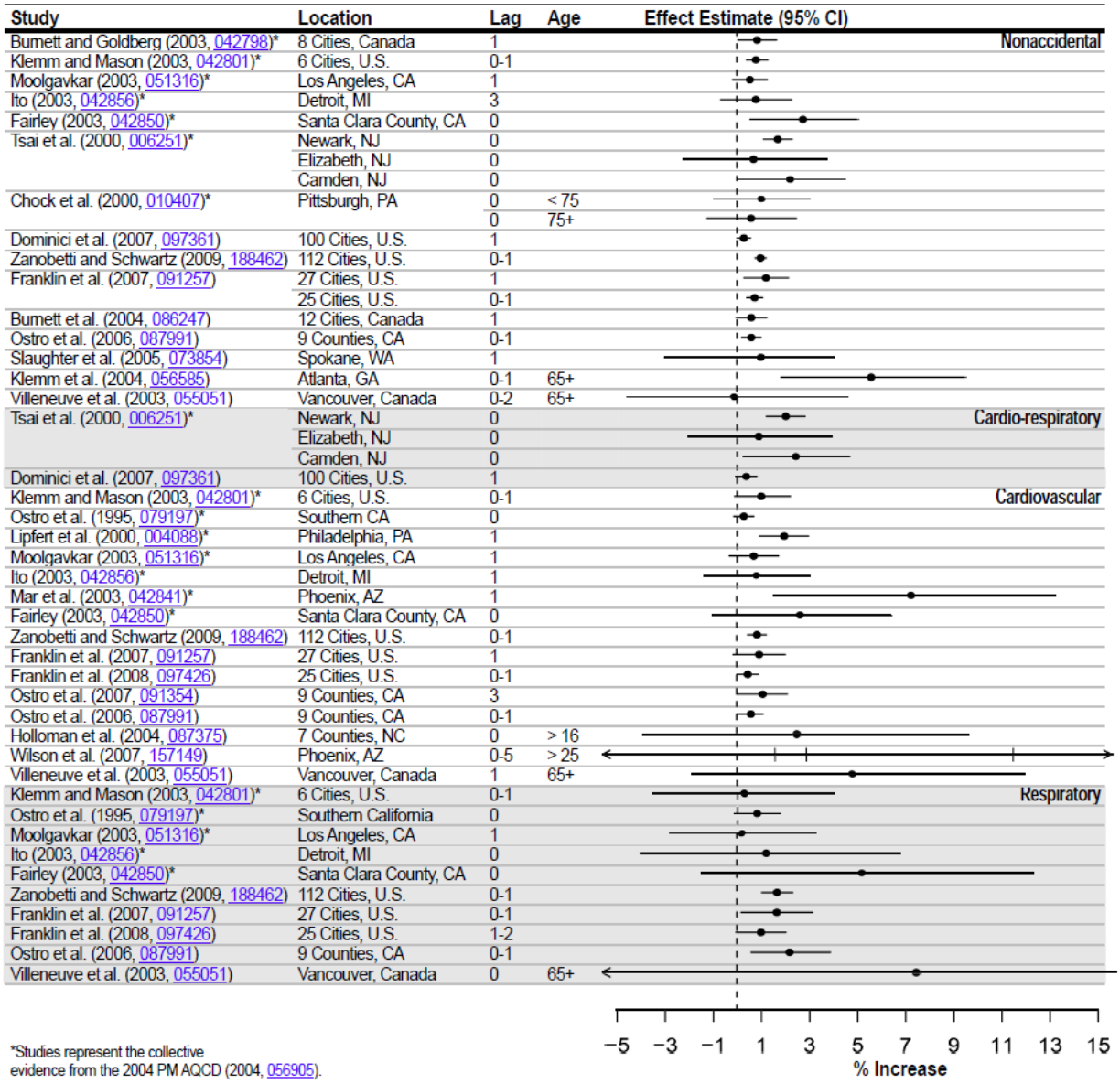


FIGURE I-4

Summary of Non-accidental All-Cause and Cause-Specific Mortality per 10 µg/m3 Increase in PM2.5 Short-term Exposures, for U.S.- and Canadian-based studies (from (U.S. EPA 2009), Figure 6-27). "Lag" indicates the number of days between the exposure and the outcome assessed.

A major knowledge gap in understanding the relative importance of "fine" PM (PM2.5) and "coarse" PM (PM10-2.5) is the relative lack of direct measurements of PM10-2.5. Most estimates are made by subtracting PM2.5 from PM10 measured at co-located samplers, a process that is subject to errors that are inherent in the subtracting of one relatively large number from another. More research is needed to better assess the relative effects of coarse (PM10-2.5) fractions of particulate matter on mortality. A graph from the U.S. EPA review is included in the figure below to demonstrate ranges

of mortality findings associated with coarse particulates. Consistent positive associations are seen, particularly for cardiovascular and nonaccidental all-cause mortality, with varying degrees of precision across the different studies.

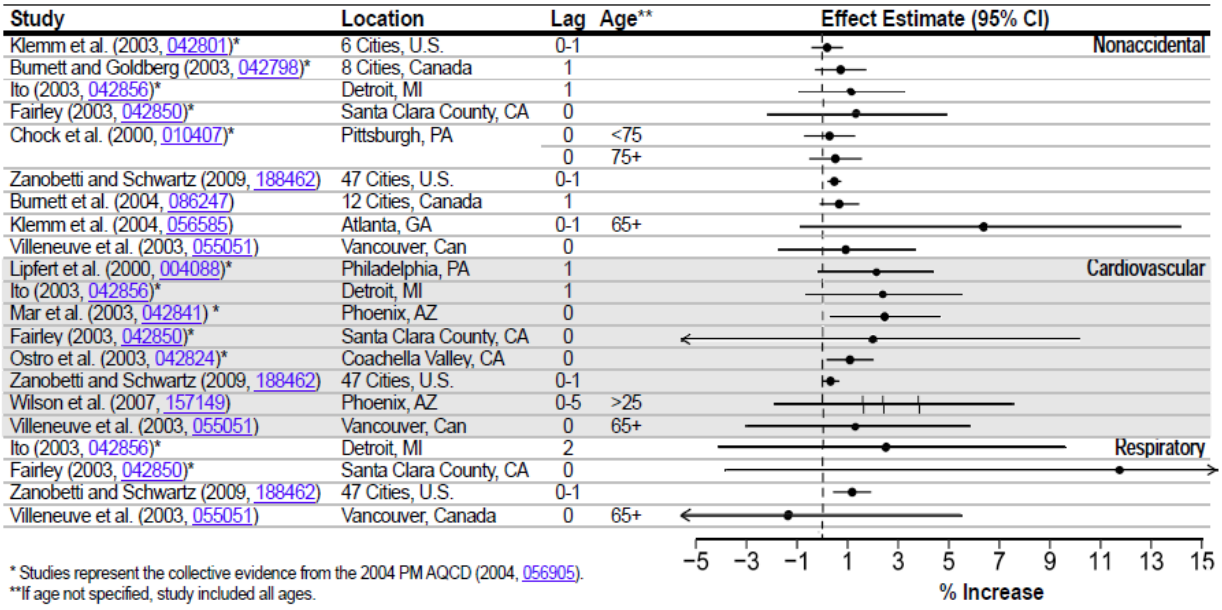


FIGURE I-5

Summary of Percent Increase in Total (Nonaccidental) and Cause-Specific Mortality Per 10 µg/m3 Increase in PM10-2.5 Short-term Exposure (from (U.S. EPA 2009), Figure 6-30). "Lag" indicates the number of days between the exposure and the outcome assessed.

A number of studies have evaluated the association between particulate matter exposure and indices of morbidity such as hospital admissions, emergency room visits or physician office visits for respiratory and cardiovascular diseases. The effect estimates for these various morbidities are generally higher than the estimates for mortality. Observed effects have been associated with PM10, PM2.5 and PM10-2.5.

In the NMMAPS study, hospital admissions for those 65 years or older were assessed in 14 U.S. cities. Several models were compared to estimate associations of hospital admissions for specific disease categories and short-term PM10 levels. Hospital admissions showed an increase ranging from 0.68 – 1.47 percent for cardiovascular diseases, a range of 1.46 – 2.88 percent increase for COPD, and a range of 1.31 – 2.86 percent increase for pneumonia per 10 µg/m^3 increase in PM_{10} (Samet et al. 2000b). In the reanalysis of the study (Health Effects Institute 2003), it was found that when using different models, the pollution coefficients were generally lower. However, the authors note that most of the conclusions of associations with PM10 exposures and hospital admissions held. Two recent Southern California studies evaluated associations between short-term PM2.5 levels and asthma-related hospital or emergency admissions. One study, based in Orange County, reported

increased risk of asthma-related hospital encounters with increased ozone and PM2.5 in the warm seasons, and with CO, NO_x, and PM2.5 in the cool seasons (Delfino et al. 2014). The second study, conducted in Los Angeles County, reported monthly average PM2.5, CO, and NO_2 levels were positively associated with asthma hospitalization rates (Delamater et al. 2012).

Similarly, school absences, lost workdays, and restricted activity days have also been used in some studies as indirect indicators of acute respiratory conditions (Ostro 1987; Ostro 1990; Ransom et al. 1992; Gilliland et al. 2001; Park et al. 2002; Hales et al. 2016). These observations help support the hypotheses that particulate matter exposures increase inflammation in the respiratory tissues and may also increase susceptibility to infection (U.S. EPA 2009).

Some studies have reported that short-term particulate matter exposure is associated with changes in lung function (lung capacity and breathing volume); upper respiratory symptoms (hoarseness and sore throat); and lower respiratory symptoms (increased sputum, chest pain and wheeze). The severity of these effects is widely varied and is dependent on the population studied, such as adults or children with and without asthma. Sensitive individuals, such as those with asthma or pre-existing respiratory disease, may have increased or aggravated symptoms associated with short-term particulate matter exposures. Several studies have followed the number of medical visits associated with pollutant exposures. A range of increases from 1 to 4 percent for medical visits for respiratory illnesses was found corresponding to a 10 $\mu g/m^3$ change in PM10. A number of studies also looked at levels of PM2.5 or PM10-2.5. The findings suggest that both the fine and coarse fractions may have associations with some respiratory symptoms (U.S. EPA 2009). Among the newer health endpoints evaluated in recent studies of short-term effects of PM2.5 is stroke. One recent meta-analysis evaluated 16 studies of short-term PM2.5 exposures and estimated a 5 percent increased risk of stroke for each 10 $\mu g/m^3$ increase in PM2.5 (Shin et al. 2014).

The biological mechanisms by which particulate matter can produce health effects have been investigated in laboratory studies. Brook et al. (Brook et al. 2010) summarized three likely pathways by which PM exerts it effects on cardiovascular health outcomes: (1) PM can activate inflammatory pathways and cause systemic oxidative stress, leading to the production of pro-inflammatory cytokines; (2) PM can disrupt the autonomic nervous system leading to increased blood pressure, increased arrhythmic potential, and decreased heart rate variability; and (3) PM, particularly UFPs or particle constituents such as organic compounds and metals, can enter the bloodstream and cause increased constriction of the blood vessels and increased blood pressure. Each of these pathways may also lead to the formation of reactive oxygenated species (ROS, or free radicals) that can cause DNA oxidation and systemic inflammation. Inflammatory responses in the respiratory system in humans and animals can lead to inflammation in fat tissues and in the liver, which can lead to vascular dysfunction (e.g. atherosclerosis), changes in metabolic function (e.g. insulin resistance), and increased thrombotic potential (Brook et al. 2010). Several reviews discuss mechanistic studies in detail (Brunekreef et al. 2002; Brook et al. 2004; Brook et al. 2010). A study in cells using ambient air samples in communities near railyards in the South Coast Air Basin found that the PM2.5 phase of ambient air pollution contains prooxidant components, primarily metals, which can trigger an

inflammatory response in the cells (Eiguren-Fernandez et al. 2015; Cho 2016). The same study noted that vapor phase pollutants, which contain most of the electrophiles, may trigger a different biological response in the cells, suppressing inflammatory responses and could result in a reduced ability to fight off infections.

Some studies have examined the health effects of short-term exposures to specific PM constituents and sources (Lippmann 2014; Basagana et al. 2015; Atkinson et al. 2016). While there is some evidence suggesting possible links with specific constituents or sources, such as diesel exhaust, sulfates (related to coal combustion), and certain metals, the U.S. EPA determined that there were not enough studies evaluating short-term constituent- or source-specific exposures at the time of the previous Integrated Science Assessment to be able to make a causal determination (U.S. EPA 2009).

Long-Term Exposure Effects of PM

Numerous studies have evaluated the health effects of long-term (months to years) or chronic exposure to particulate matter, with the largest number of studies examining cardiovascular and respiratory health endpoints, as well as mortality. Other health outcomes that have been linked to long-term PM exposures include reproductive effects, cancer outcomes, and, more recently, metabolic syndromes and neurological effects. The U.S. EPA 2009 Integrated Science Assessment for Particulate Matter (ISA for PM) concluded that sufficient evidence is available to support a causal determination for long-term PM2.5 exposures and cardiovascular and mortality effects, and a likely causal relationship for respiratory effects. A summary of the evidence is presented below, focusing on the long-term effects of PM2.5 exposures.

Many research studies, including some recent studies, have evaluated the health effects of exposures to air pollutants from traffic emissions using a variety of exposure modeling techniques (Hart et al. 2014; Harris et al. 2015; Kingsley et al. 2015; Rice et al. 2015; Danysh et al. 2016). In general, these articles are not discussed in detail here, because of the difficulty in attributing the observed effects to a specific pollutant or combination of pollutants. However, these studies do provide supporting evidence that air pollutants from traffic exhaust are linked to health effects in humans.

Long-Term Particulate Matter Exposures and Mortality

Since the initial promulgation by U.S. EPA of the National Ambient Air Quality Standards for PM2.5, controversy has remained over the association of mortality and exposures to PM2.5. Several large, prospective cohort studies conducted in the U.S. and Canada were used to evaluate long-term PM exposures and mortality, including total number of deaths and deaths due to specific causes. The strongest and most consistent evidence of long-term PM2.5 effects are for cardiovascular mortality, particularly ischemic heart disease, and there is evidence that ambient PM2.5 exposure is associated with and lung cancer mortality (Dominici et al. 2006; Krewski et al. 2009; Jerrett et al. 2013; International Agency for Research on Cancer 2015). Below is a brief discussion of the evidence linking

PM and mortality reviewed in the U.S. EPA 2009 ISA along with more recently published studies, with a focus on large prospective studies and studies conducted in California or Southern California.

In the assessment of evidence for mortality outcomes linked to long-term PM exposures, the 2009 U.S. EPA ISA for PM reviewed 15 studies evaluating PM2.5 exposures, 2 studies evaluating PM10-2.5 exposures, and 5 studies evaluating PM10 exposure. The majority of these studies were conducted in the United States, and 3 of the studies of PM2.5 exposures were conducted in California or Southern California. Previous reviews conducted in 1996 and 2004 by U.S. EPA assessed evidence primarily from large prospective cohort studies, such as the Harvard Six Cities Study (Dockery et al. 1993), the American Cancer Society (ACS) Study (Pope et al. 1995; Pope et al. 2002), and the Seventh-Day Adventist Health Air Pollution (AHSMOG) Study (Abbey et al. 1999; McDonnell et al. 2000). The U.S. EPA 2004 PM Air Quality Criteria Document concluded that there was strong evidence linking long-term PM2.5 exposures to all-cause and cardiopulmonary mortality, but not enough evidence for a link with PM10-2.5. The 2009 U.S. EPA ISA for PM similarly concluded that the newer studies provide additional evidence to support a causal determination for long-term PM2.5 exposures and increased mortality risk, but there continues to be insufficient evidence supporting such a link with particles in the coarse fraction. This most recent U.S. EPA review evaluated the additional updated analyses of the previously-established large cohort studies (Harvard Six Cities, ACS, AHSMOG, and Veterans studies), and noted two new major cohorts that provide further evidence linking PM2.5 and mortality: the Women's Health Initiative (WHI) study (Miller et al. 2007) and the Medicare Cohort Studies (Eftim et al. 2008).

The American Cancer Society Cancer Prevention Study II (ACS) is a large, prospective national cohort study of over one million participants in the U.S. recruited from all 50 states, the District of Columbia and Puerto Rico, and followed over many years. Over the past two decades, studies using data from this cohort have reported associations for PM2.5 for both total mortality and cardiorespiratory mortality (Pope et al. 1995; Krewski 2000; Pope et al. 2002; Jerrett et al. 2005; Krewski et al. 2009; Jerrett et al. 2013; Pope et al. 2015). The survey included several measures of smoking and exposure to second-hand smoke, which were included in the statistical models to account for the potential confounding effects of smoking. The original study reported that long-term exposures to fine particulate air pollution were associated with cardiopulmonary and lung cancer mortality (Pope et al. 1995). In a reanalysis of the data (Krewski 2000), mortality rates and PM2.5 levels were analyzed for 50 metropolitan areas of the U.S. Average (median) levels from monitors in each metropolitan area were used to estimate PM2.5 exposures. At these levels of aggregation, regional differences in the association of PM2.5 and mortality were noted, with higher mortality risks in the Northeast and Midwest, and more moderate mortality risks in the West.

Another follow-up study of the American Cancer Society cohort confirmed and extended the findings in the initial study. The researchers estimated that, on average, a 10 $\mu g/m^3$ increase in fine particulates was associated with approximately a 4 percent increase in total mortality, a 6 percent increase in cardiopulmonary mortality, and an 8 percent increase in risk of lung cancer mortality (Pope et al. 2002). In an additional reanalysis and extension of the American Cancer Society cohort

from 1982 to 2000 (Krewski et al. 2009), and including additional metropolitan areas for the most recent years, effects estimates on mortality were similar, though somewhat higher than those reported previously. The extended analyses included an additional 11 years of cohort follow-up compared to the original study. The authors reported positive and significant association between a 10 $\mu g/m^3$ change in PM2.5 level and all-cause, cardiopulmonary disease, and ischemic heart disease deaths. Mortality from ischemic heart disease was associated with the largest risk estimates.

Subsets of the ACS study data have also been evaluated to estimate effects in California and the metropolitan Los Angeles area (Jerrett et al. 2005; Jerrett et al. 2013). These results are discussed further below, along with results of other California or Southern California-based studies.

The Harvard Six Cities Study is a large prospective cohort study of adults in six U.S. cities, and began in the year 1974. The original analysis and a subsequent reanalysis found positive associations between particulate matter and sulfate in relation to mortality, after controlling for potential confounding factors such as smoking status, sex, age, and other factors (Dockery et al. 1993)(Krewski 2000). An extension of the Harvard Six Cities Cohort confirmed the association of mortality with PM2.5 levels, and reported that improvements in PM2.5 levels over the study time period were associated with decreased mortality risk (Laden et al. 2006). An update to this study covering the years 1974 to 2009 found a linear relationship of PM2.5 levels and mortality from all causes, cardiovascular causes, and from lung cancer (Lepeule et al. 2012). According to the authors, the PM2.5 levels decreased over time, but no evidence of a threshold for these effects was found.

AHSMOG is a cohort study of non-Hispanic white Seventh-day Adventists in California, with participants followed starting from the late 1970's. Confounding due to smoking in this study is unlikely due to very low smoking rates in this population; however, the study is limited in its the ability to apply the findings to other population groups. The study has linked long-term PM10 exposures and other air pollutants to deaths from all natural causes and deaths due to lung cancer among males (Abbey et al. 1999), although the authors concluded that these associations were likely due to exposures to fine particles rather than the coarse fraction of PM10 (McDonnell et al. 2000). In a re-analysis of the data, the study found PM2.5 was associated with an increased risk of coronary heart disease mortality among females but not among males (Chen et al. 2005). Similar associations among females only were found for coarse particles and PM10.

Other cohort studies include an analysis of mortality and PM2.5 exposures in a Medicare enrollee population. Zeger et al. (Zeger et al. 2008) assembled a Medicare enrollee cohort by including all Medicare enrollees residing in over 4,500 zip codes with centroids within six miles of a PM2.5 monitor. PM2.5 data was obtained from the monitoring stations, and mean annual levels were calculated for the zip codes within six miles of each monitor. The authors found that long-term exposures to PM2.5 was associated with all-cause mortality for the eastern and central portions of the U.S., and these mortality risk estimates were similar to those previously published in the Six Cities Study and the American Cancer Society cohorts. The authors reported that there were no statistically significant associations between zip code levels of PM2.5 and all-cause mortality rates in the western

region of the U.S. This finding was attributed largely to the higher PM2.5 levels in Los Angeles area counties compared to other western urban areas, but there were not higher mortality rates in the Los Angeles area counties. Several factors could explain this finding. The authors note that the toxicity of the PM mixture may differ by location, e.g. with higher PM2.5 sulfate levels in the eastern region. In addition, the use of ecological data rather than individual-level data for exposure assessment and some confounding factors, and the assessment of all-cause mortality rather than cause-specific mortality may have impacted the results of this study. For example, the authors used county-level COPD risk as an estimate of smoking prevalence, because individual-level measures of smoking were not available. The authors further reported that they found no associations of PM2.5 with all-cause mortality in persons aged 85 years or higher, which may reflect other competing causes of death in this age group not related to air pollution exposures.

The Women's Health Initiative (WHI) Study is a nationwide cohort of post-menopausal women in 36 metropolitan areas of the U.S. who had no history of cardiovascular disease (Miller et al. 2007). The study found that long-term exposure to PM2.5 was associated with a 24 percent increased risk of cardiovascular disease and a 76 percent increased risk of death from cardiovascular causes for each additional 10 $\mu g/m^3$ of PM2.5; these relative risk estimates are larger than those reported in the ACS and Six Cities Studies, but differences in health status, PM composition, and overall mortality risk in these distinct populations may account for such differences in the effect estimates. The WHI study results accounted for the potential confounding effects of several factors, including medical risk factors for cardiovascular disease, measures of socioeconomic status, and cigarette smoking. Another large cohort study focusing on women is the Nurses' Health Study, which found that PM10 exposures were associated with all-cause mortality and fatal coronary heart disease, with exposures 24 months prior to death having the strongest effects (Puett et al. 2008). These results accounted for several potential confounders, including smoking status and history, medical risk factors for cardiovascular disease, and area-level measures of socioeconomic status. This study did not evaluate PM2.5 exposures.

A recent pooled analysis of 22 European cohorts and including over 350,000 participants evaluated long-term air pollution exposures and exposure to PM2.5, PM10, and nitrogen oxides, using land use regression models to estimate exposures (Beelen et al. 2014). The authors reported that a 5 $\mu g/m^3$ increase in PM2.5 was associated with approximately a 7 percent increase in mortality from natural causes.

Estimates of mortality risks associated with long-term PM2.5 levels from recent studies are shown in the figure below. The recent evidence is consistent with past studies, showing increased risk of premature death with increased PM2.5 exposures. For cause-specific mortality, consistent positive associations are seen with cardiovascular mortality endpoints and with lung cancer deaths, but weak associations are seen with overall respiratory mortality.

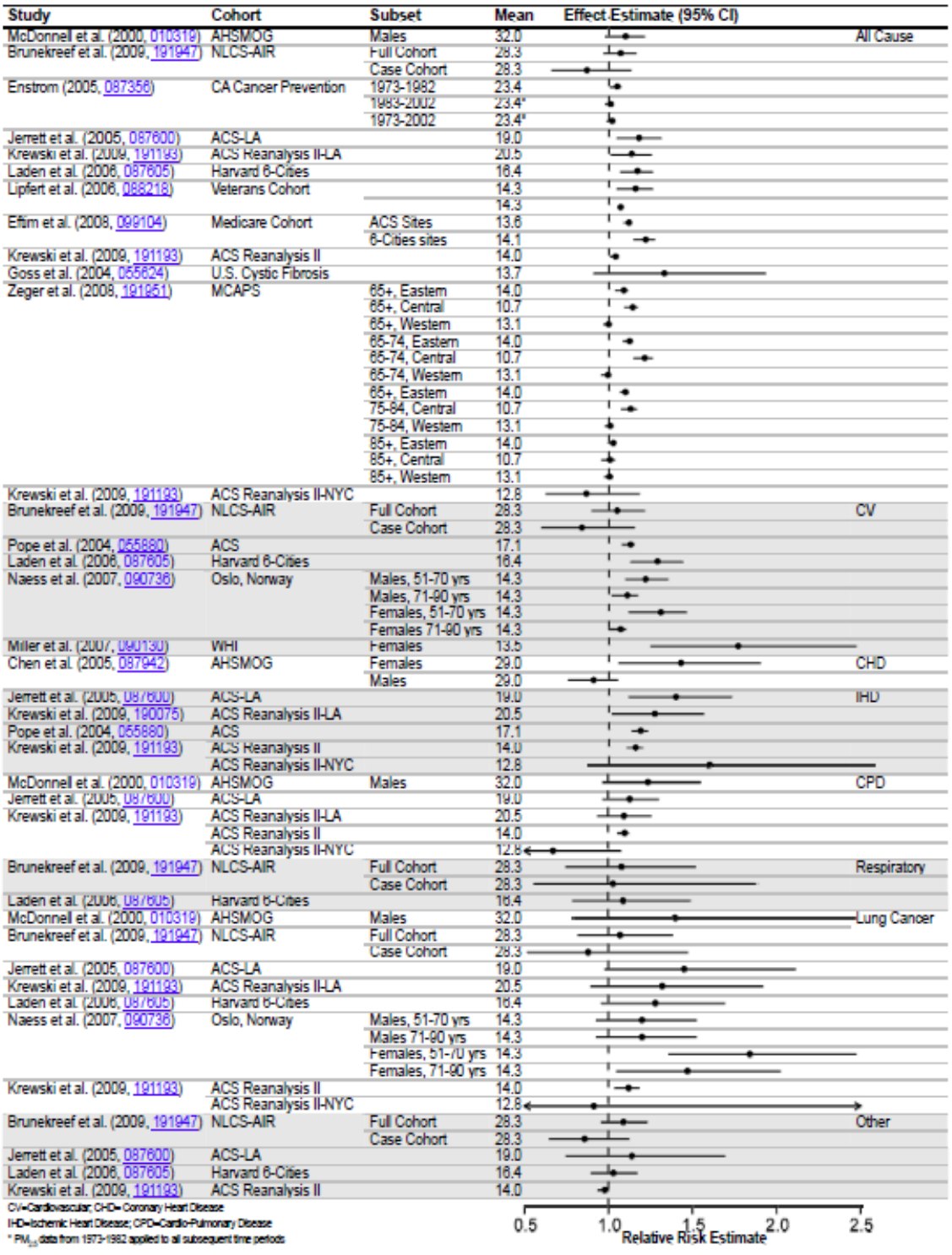


FIGURE I-6

Mortality Risk Estimates, Long-Term Exposure to PM2.5 in Cohort Studies (From (U.S. EPA 2009), Figure 7-7). "Mean"=mean PM2.5 exposure estimates in the study. CV=cardiovascular, CHD=coronary heart disease, IHD=ischemic heart disease, CPD=cardiopulmonary disease.

In addition to the AHSMOG study, other analyses of mortality and PM2.5 levels specific to California have also been reported, including an analysis of a subset of the ACS II data. An analysis of the ACS II study (Jerrett et al. 2013) followed individuals in California from that cohort recruited starting in 1982, with follow-up to 2000. PM2.5 levels at subject residences were estimated using land use regression models. Over 40 potential confounders were included in the statistical models, and included individual-level variables (e.g. smoking, diet, demographic, and other factors) and neighborhood-level variables (e.g. unemployment, poverty, income inequality, racial composition). The authors noted that mortality rates differ in urban areas compared to non-urban areas, and adjusted for urban/rural status in the model to estimate pollution effects on mortality. All-cause mortality, mortality from cardiovascular disease, and mortality from ischemic heart disease were positively associated with PM2.5 levels in single-pollutant models. These associations with PM2.5 remained after additional adjustment for ozone levels. Because of moderate correlations across pollutants, it may not be possible to draw conclusions about which pollutant(s) in this mixture cause the observed effects. Positive associations of all-cause and certain cause-specific mortality rates with estimated NO_2 and ozone levels were also found. The authors concluded that these results indicate that several components of combustion-related pollutant mixture are associated with mortality.

A study analyzed data from the California Teachers Study cohort of over 100,000 active and retired school teachers recruited in 1995, and followed through 2005 (Lipsett et al. 2011). Pollutant exposures at the subject residences were estimated using data from ambient monitors, and extrapolated using a distance-weighted method. The authors reported that a 10 $\mu g/m^3$ increase in PM2.5 was associated with a 20 percent risk increase in mortality from ischemic heart disease, but no associations were found with all-cause, cardiovascular, or lung cancer mortality. A 10 $\mu g/m^3$ increase in PM10 was associated with increased risk of ischemic heart disease and incident stroke. These results accounted for several individual- and neighborhood-level factors, including smoking, second-hand smoke, medical risk factors for cardiovascular disease, and indicators of socioeconomic status.

A more recent analysis of the California Teachers Study cohort from 2001 through 2007 estimated the association between particulate pollutants and all-cause, cardiovascular, ischemic heart disease, and respiratory mortality (Ostro et al. 2015). Exposure data at the residential level were estimated by a chemical transport model that computed pollutant concentrations from over 900 sources in California. Besides particle mass, monthly concentrations of 11 species and 8 sources or primary particles were generated at 4-km grids. The results were reported as finding statistically significant associations of ischemic heart disease mortality with PM2.5 mass and several of its components (Figure I-7). The study also found significant positive associations between ischemic heart disease mortality and ultrafine particle mass as well as several ultrafine particulate components including elemental carbon, organic carbon, copper, metals, meat cooking, and mobile source derived components. An earlier study using data from the same cohort had used monitoring data to estimate mortality risk, and similarly reported increased risk of all-cause, cardiopulmonary, and ischemic heart disease mortality with higher exposures to PM2.5 mass. This study also reported increased ischemic heart disease risk with higher exposures to PM2.5 constituents such as organic carbon, sulfates, and

nitrates (Ostro et al. 2010). Both studies adjusted for several individual- and neighborhood-level covariates, including smoking status and indicators of socioeconomic status.

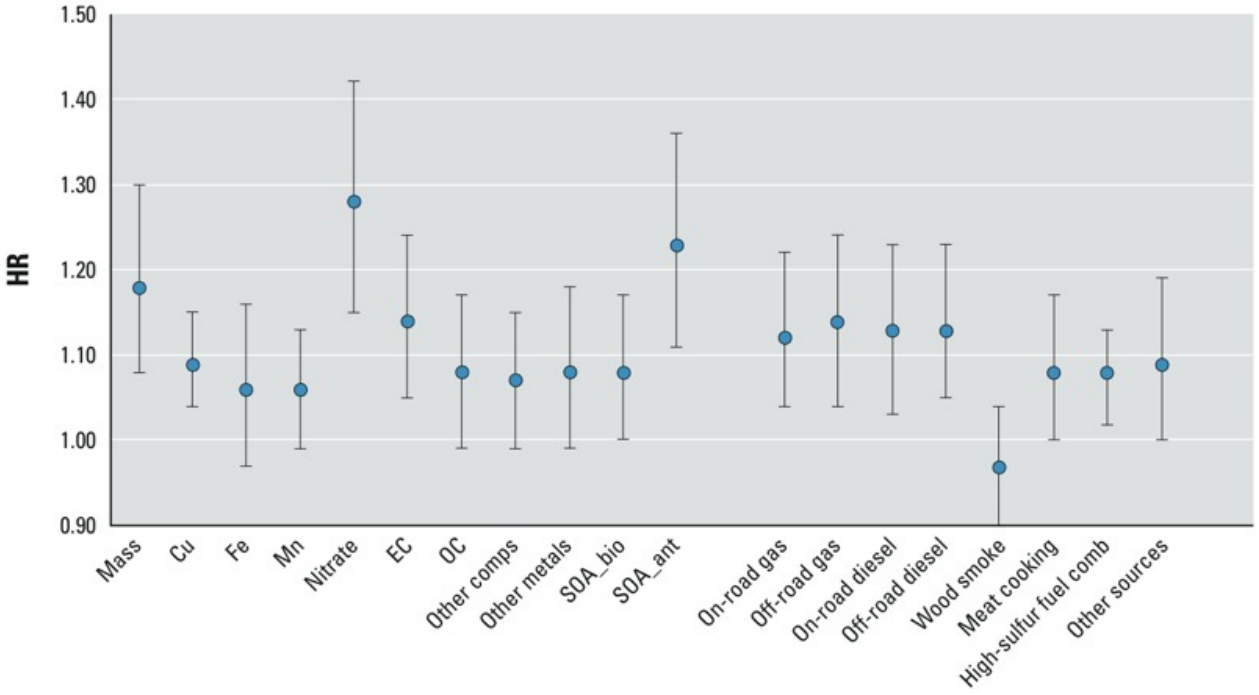


FIGURE I-7

Association of PM2.5 constituents and sources with Ischemic Heart Disease mortality (Hazard Ratios and 95 percent Confidence Intervals) using interquartile range. Abbreviations: comb = combustion; comps = components; SOA_bio= secondary organic aerosols from biogenic sources (derived from long-chain alkanes, xylenes, toluenes, and benzene and their oligomers); SOA_ant=secondary organic aerosols from biogenic sources (derived from isoprenes, monoterpenes, and sesiquiterpenes and their oligomers). (From (Ostro et al. 2015))

A cohort of elderly individuals (average age of 65 years in 1973) recruited from 11 California counties was followed over several years (Enstrom 2005). A positive association for long-term PM2.5 exposure with all-cause deaths was reported from 1973–1982. However, no significant association was found in the later time period of 1983–2002. PM2.5 levels were obtained from measurements made during 1979- 1983 by the EPA as part of the Inhalable Particle Monitoring Network and the cohort was confined to those participants in the American Cancer Society Cancer Prevention Study I who were living in the 11 counties that had one of the monitors. Pollutant levels were estimated using data from these monitors and averaged over each county, which may lead to exposure misclassification and bias toward finding no effect. The study adjusted for several potential confounding factors, including demographic factors, smoking, body mass index, and other factors.

The California Air Resources Board recently conducted a cross-sectional study of long-term PM2.5 exposures in rural and urban areas within California, using ambient monitoring data from 116

stations in the monitoring network, and calculating zip code-level exposure estimates (Garcia et al. 2016). The study observed larger effect sizes for increased PM2.5-related mortality risk in rural compared to urban areas from all causes, cardiovascular disease and cardiopulmonary disease. In urban areas, the study found PM2.5 exposures to be associated with increased risk of cardiovascular disease, ischemic heart disease, and cardiopulmonary disease; however, for all-cause non-accidental mortality risk, only an exposure model restricted to people living within 10 km of a monitoring station in urban areas showed an association with PM2.5. This study did not control for the potential confounding effects of smoking.

A recent study analyzed data from the National Institutes of Health AARP Diet and Health cohort, including about 160,000 participants in California (Thurston et al. 2016). Census tract-level PM2.5 exposures were estimated based on land use regression models. For the California cohort, PM2.5 levels were associated with an approximately 10 percent increase in cardiovascular disease mortality risk for each additional 10 $\mu g/m^3$ of PM2.5. A small but positive effect estimate was found for all-cause mortality in California, and no association was found for respiratory mortality in the California cohort, although the estimates indicated uncertainty in the magnitude and direction of these effects. This study adjusted for several potential confounders, including demographic factors, smoking, and indicators of socioeconomic status.

A few studies have focused on particulate matter exposure and health effects in residents of Southern California. Two analyses of the American Cancer Society II cohort, for example, focused specifically on the Los Angeles Metropolitan area using methods to estimate exposures on a finer geographical scale than previous studies that used geographic scales at the county or metropolitan area. Improved exposure estimation methods reduce potential bias from exposure misclassification. Using data from monitoring stations in the Los Angeles area, one study applied interpolation methods (Jerrett et al. 2005) and another applied land use regression techniques (Krewski et al. 2009) to estimate PM2.5 exposures to the study participants. Significant associations of PM2.5 with mortality from all causes and cardiopulmonary disease were reported, with the magnitude of risks being higher than those from the national studies of the American Cancer Society II cohort. Such improved exposure estimation techniques can reduce misclassification bias in epidemiological studies. It should be noted that various analyses were presented in these as well as other studies to estimate the influence of various individual-level and ecologic variables that might also be related to health effects risks. Including such variables helps control for potential confounding, but generally reduces the estimated association between PM2.5 and all-cause mortality. It may be illustrative to describe some of the estimates from the various calculations as presented by the authors of the Los Angeles area cohort (Krewski et al. 2009). In the descriptions in Table I-9, HR refers to the "hazard ratio" expressed for a 10 $\mu g/m^3$ change in PM2.5 exposure, followed by the 95 percent Confidence Interval. For example, if the hazard ratio is 2, the risk would be twice as high; and, conversely if the hazard ratio is 0.5, the risk would be one-half of that of the reference group. Several of the analyses results follow as excerpted from Krewski, 2009. Table I-8 includes PM2.5, plus various additional individual and ecological variables. Similar effects of covariate adjustment were seen for hazard ratios for

mortality from ischemic heart disease, although effect estimates were stronger for ischemic heart disease mortality compared to those for all-cause mortality.

TABLE I-8

Influence of Adding Confounding Variables on All-Cause Mortality

VARIABLE INCLUDED	HAZARD RATIO per 10 µg/m^3 change in PM2.5 exposure
PM2.5 alone (stratified for age, sex, and race)	1.197 (95% CI, 1.082–1.325);
PM2.5 with 44 individual-level covariates*	1.143 (95% CI, 1.033–1.266)
PM2.5 with 44 individual-level covariates and the ecologic covariate of unemployment	1.127 (95% CI, 1.015–1.252)
PM2.5 with 44 individual-level covariates and social factors extracted from the principal component analysis (which account for 81% of the total variance in the social variables)	1.142 (95% CI, 1.026–1.272).
PM2.5 with 44 individual-level covariates and all ecologic covariates that were individually associated with mortality in bivariate models with PM2.5 exposure	1.115 (95% CI, 1.003–1.239)
PM2.5 parsimonious model that included 44 individual-level covariates and ecologic confounder variables that both reduced the pollution coefficient and had associations with mortality	1.126 (95% CI, 1.014–1.251)

*These covariates included several measures of smoking.
(From Krewski, 2009)

U.S. EPA also released a Regulatory Impact Analysis (U.S. EPA 2012) which looked at the costs and benefits of alternate PM2.5 standard levels. As part of the analysis, U.S. EPA looked at California-specific studies regarding PM2.5 and mortality published in the scientific literature. The U.S. EPA analysis concluded "most of the cohort studies conducted in California report central effect estimates similar to the (nation-wide) all-cause mortality risk estimate we applied from Krewski et al. (2009) and Laden et al. (2006) albeit with wider confidence intervals. A couple of cohort studies conducted in California indicate higher risks than the risk estimates we applied." Thus, in U.S. EPA's judgment, the California-related studies provided estimates of mortality consistent with or higher than those from the national studies.

At the time of the 2009 ISA, few studies had examined long-term exposures to chemical-specific PM constituents or compared source-specific PM effects on mortality (U.S. EPA 2009). The 2009 ISA discussed only two studies that used direct measurements of PM constituents other than sulfates: the Veteran's Cohort (Lipfert et al. 2006) and the Netherlands Cohort Study (Beelen et al. 2008). These studies found mortality associations with long-term exposures to traffic pollutants, nitrates and sulfates.

With measures adopted to control emissions of air pollutants, ambient levels of PM2.5 have been decreasing. These reductions in particulate matter have been associated with reductions in mortality. For example, studies have found that increases in life expectancy are associated with reductions in air pollution levels, and that a portion of this increase can be attributed to reductions in PM2.5 exposures (Correia et al. 2013; Pope et al. 2013).

Long-Term Particulate Matter Exposures and Cardiovascular Effects

Studies of cardiovascular mortality provide the strongest evidence of an association between PM2.5 exposures and cardiovascular effects. The U.S. EPA 2009 ISA review determined that the evidence is sufficient to infer a causal relationship between long-term PM2.5 exposures and cardiovascular effects. In addition to the studies of mortality, other epidemiological studies provide additional evidence of sub-clinical and clinical cardiovascular effects, while toxicological studies suggest a plausible biological mechanism for such effects (Fanning et al. 2009; U.S. EPA 2009).

Epidemiological studies of subclinical effects typically have used subclinical measures of atherosclerosis, which is an underlying disease contributing to many clinical cardiovascular outcomes such as myocardial infarction, sudden cardiac death, stroke, and vascular aneurysms (U.S. EPA 2009). A study in Southern California residents used the carotid intima-media thickness (CIMT) as a measure of subclinical atherosclerosis (Kunzli et al. 2005). The subjects' residential areas were geocoded and a geospatial extrapolation of ambient monitoring data was used to assign annual mean concentrations of ambient PM2.5. The authors report results of an association between atherosclerosis and ambient air pollution as measured by PM2.5. The associations of PM2.5 and CIMT were strongest in women ≥ 60 years of age. The Multi-Ethnic Study of Atherosclerosis (MESA) is a population-based study of people living in 6 U.S. cities or counties, including Los Angeles, CA (Diez Roux et al. 2008). The MESA study reported that 20-year average PM2.5 exposures corresponded to a small increase in CIMT, although the magnitude of the increase was much smaller than the Kunzli 2005 study. The study accounted for the potential influence of sociodemographic factors, lipid status, smoking, diabetes, body mass index, and geographical location. Such differences may be attributable to differences in the study populations. Other sub-clinical outcome measures for atherosclerosis in the MESA study were weakly associated or not associated with PM exposures.

Clinical cardiovascular outcomes have also been examined in several epidemiological studies, including two that were based on prospective cohort studies: the Women's Health Initiative (WHI) Observational Study (Miller et al. 2007) and the Nurses' Health Study (Puett et al. 2008). Both these studies also examined cardiovascular mortality, and found links with long-term particulate matter

exposures. The WHI study included only women who were free of cardiovascular disease at enrollment, and estimated PM2.5 exposures using a nearest monitor approach. The study found PM2.5 exposures to be associated with cardiovascular disease outcomes, including myocardial infarction, revascularization, stroke, coronary heart disease death, and cerebrovascular disease, and accounted for the several potential confounding factors, such as sociodemographic factors, medical risk factors for cardiovascular disease, and cigarette smoking (Miller et al. 2007). An analysis of the Nurses' Health Study included women without a history of myocardial infarction and who lived in certain metropolitan areas in the northeastern U.S. (Puett et al. 2008). Long-term PM10 exposures were estimated using land use regression models as well as air pollution monitoring data, and the results accounted for potential confounding by smoking status and history, medical risk factors for cardiovascular disease, and area-level measures of socioeconomic status. This study found positive associations with the risk of all-cause and coronary heart disease mortality, and the results were suggestive of a link to coronary heart disease events although there was a great deal of uncertainty in this result. Other studies conducted in the U.S. and Europe have examined clinical cardiovascular outcomes with varying results (U.S. EPA 2009).

The U.S. EPA 2009 ISA concluded that epidemiologic studies, along with toxicological evidence linking PM exposures to atherosclerosis and other cardiovascular outcomes, provides evidence linking PM to cardiovascular effects and mortality. While the associations between PM and subclinical and clinical measures have inconsistent results, the consistency of the studies linking PM exposures to cardiovascular mortality and the coherence of the toxicological studies provide support for U.S. EPA's causal determination.

Long-Term Particulate Matter Exposures and Respiratory Effects

The U.S. EPA 2009 ISA review determined that the evidence for long-term particulate matter exposures on respiratory effects is likely to be causal. Several studies, including prospective cohort studies, have assessed the effects of long-term particulate matter exposure on respiratory symptoms and lung function changes. Consistent, positive associations have been found with respiratory symptoms, such as bronchitis, poorly controlled asthma, and decreased lung function in children (U.S. EPA 2009; Guarnieri et al. 2014). Since many of the studies of children included survey measures, these studies typically controlled for the potential confounding effect of tobacco smoking by the child and exposure to second-hand smoke at home, and some studies were also able to account for exposure to maternal smoking *in utero*.

The Southern California Children's Health Study established cohorts of school children from 12 Southern California communities, and followed these participants over time. One of the early studies from this cohort reported positive associations of particulate matter with prevalent bronchitis or phlegm among children with asthma. These effects were also associated with NO_2 and acid vapor levels (McConnell et al. 1999). Another study based on this cohort reported a lower rate of growth in lung function in children living in areas with higher levels of particulate pollution (Gauderman et al. 2000). Decreases in lung function growth were associated with PM10, PM2.5, PM10-2.5, acid

vapor, and NO_2. There was no association with ozone levels. The investigators were not able to identify independent effects of the pollutants but noted that motor vehicle emissions are a major source of the pollutants.

A follow-up study on a second cohort of children confirmed the findings that decreased lung function growth was associated with particulates, nitric oxides, and elemental carbon levels (Gauderman et al. 2002). Elemental carbon is often used as a measure for diesel particulate. Additionally, children who moved to areas with less air pollution were found to show improvement in lung function growth rate, while those who moved to areas with higher PM10 and NO_2 showed declines in lung function growth rates (Avol et al. 2001). By the time the fourth graders graduated from high school, a significant number showed lower lung function. The risk of lower lung function was about four times higher in children with the highest PM2.5 exposure when compared to the lowest exposure communities (Gauderman et al. 2004).

A follow-up report from the Children's Health Study assessed whether improving air quality in Southern California over the past decade has led to beneficial changes in health (Gauderman et al. 2015). It was reported that as the levels of nitrogen oxide and fine particulates were reduced as the result of reductions in air pollution emissions, the deficits in lung function growth were also of a smaller magnitude. Recently, the Children's Health Study cohort data were also used to evaluate associations with bronchitic symptoms in children (Berhane et al. 2016). The study found that reductions in NOx, ozone, and PM10 and PM2.5 were associated with decreases in bronchitic symptoms, with stronger effects observed in children with asthma. These results indicate that improvements in air quality, as measured by fine particulate and nitrogen oxides, are associated with improvements in children's health in Southern California.

A limited number of studies have linked PM exposures to asthma incidence. In an analysis of the Children's Health Study in Southern California, Islam et al. found that while children with better lung function are generally at lower risk of developing asthma, living in an area with long-term average PM2.5 levels ≥13.7 $\mu g/m^3$ offset this protective characteristic; in other words, this study related high PM2.5 levels with new-onset asthma in children (Islam et al. 2007). The U.S. EPA 2009 ISA report also reviewed two European studies that linked PM2.5 with asthma onset in children (Brauer et al. 2007) and adults (Kunzli et al. 2009). Two recent studies were identified in our literature search: the first study used the Sister Study national cohort and found that a 3.6 $\mu g/m^3$ increase in PM2.5 was associated with a 20 percent increased risk of incident asthma and a 14 percent increase in incident wheeze among adult females (Young et al. 2014); the second study was a study of Medicaid-enrolled children in Harris County, Texas, and found PM2.5 was associated with new-onset asthma in single-pollutant models (Wendt et al. 2014). However, accounting for the potential effects of other pollutants added substantial uncertainty in the overall effect estimates for PM2.5, meaning that it is difficult to distinguish in this study whether the effects are due to PM2.5 or other pollutant exposures.

The U.S. EPA 2009 ISA also noted that studies from many different locations, including Mexico City, Sweden, and a national cohort in the U.S. provide additional coherent and consistent evidence of respiratory effects associated with PM exposures.

Long-Term Particulate Matter Exposures and Emerging Areas of Interest

Beyond cardiovascular, respiratory and mortality effects, the U.S. EPA 2009 ISA review concluded that the evidence available at the time was suggestive of a causal relationship between long-term exposures to PM and reproductive/developmental effects, as well as cancer. Since the 2009 ISA, there have been several studies conducted that evaluated these health endpoints in relation to PM exposures, as well as studies of metabolic syndrome and neurological health outcomes. Because of the relatively long time gap since the latest ISA for PM, and because the SCAB exceeds the federal standards for PM2.5, these health endpoints are discussed briefly here, with a focus on studies conducted since the 2009 ISA, and studies conducted in California or in the SCAB.

Cancer

The U.S. EPA 2009 ISA review concluded that existing evidence is suggestive of a link between PM2.5 and cancer, with studies of lung cancer providing the strongest evidence. More recently, the International Agency for Research on Cancer (IARC) recently designated outdoor air pollution and particulate matter as carcinogenic to humans (Group 1 carcinogens), and a meta-analysis provided quantitative evidence for the associations between particulate matter and lung cancer risk (Hamra et al. 2014; International Agency for Research on Cancer 2015). The IARC review included studies evaluating associations between outdoor air pollution and lung cancer, urinary bladder cancer, breast cancer, leukemia and lymphoma, childhood cancers, and total cancers. Among these cancers, the IARC Working Group concluded that outdoor air pollution and particulate matter cause lung cancer, and that positive associations were observed between outdoor air pollution and urinary bladder cancer. The IARC Working Group also noted that associations with childhood leukemia were suggestive of an association, and, while there were some inconsistencies across studies, an association could not be ruled out. To estimate overall lung cancer risk, the meta-analysis included 14 studies reporting on PM2.5 and 9 studies reporting on PM10; the vast majority of these were cohort studies from North America and Europe. The meta-analysis found positive associations for both PM10 and PM2.5 and lung cancer risk, with the PM2.5 results being more consistent. Additionally, the study analyzed whether the association between PM2.5 and lung cancer differed by smoking status, and found positive associations for each smoking status group (current smokers, former smokers, and never-smokers).

A recent study from the Adventist Health and Smog Study-2 (AHSMOG-2) cohort in the U.S. and Canada reported that a 10 ug/m^3 increase in ambient PM2.5 increased the risk of lung cancer incidence by about 40 percent, after accounting for ozone exposures (Gharibvand et al. 2016). Because all participants are non-smokers, with over 80 percent never having smoked, and with the former smokers having an average of 24 years between quitting smoking and being diagnosed with lung cancer, the likelihood of confounding by smoking in this cohort is much lower than in most other

populations. Another recent study conducted in California evaluated air pollution in relation to survival after being diagnosed with lung cancer, and found that patients living in areas with higher NO_2, PM2.5 and PM10 had shorter survival times, particularly for those patients who were diagnosed at earlier stages of lung cancer (Eckel et al. 2016). Few other studies have evaluated air pollution effects on lung cancer survival, so this study represents a relatively newer area of research.

Reproductive Health Outcomes

The U.S. EPA 2009 ISA review concluded that existing evidence is suggestive of a link between PM2.5 and reproductive health effects. Numerous studies report evidence indicating that particulate matter exposure during pregnancy may be associated with adverse birth outcomes, with relatively consistent evidence linking PM2.5 and PM10 exposures to low birth weight or decreases in birth weight (Bobak et al. 1999; Sram et al. 2005; Stieb et al. 2012). Among the studies reviewed in the 2009 U.S. EPA ISA for particulate matter or in the literature search for more recent and/or local studies, several studies of low birth weight (defined as <2,500g or approximately 5.5 pounds at birth) or reductions in birth weight were conducted in California or in the Southern California region (Basu et al. 2004; Parker et al. 2005; Salam et al. 2005; Wilhelm et al. 2005; Morello-Frosch et al. 2010; Wilhelm et al. 2012; Basu et al. 2014; Laurent et al. 2014). Two of these studies were conducted in Los Angeles County and were published since the last AQMP in 2012, and both examined low birth weight among full-term babies ("term low birth weight"). Laurent et al. reported that a 5.82 $\mu g/m^3$ increase in PM2.5 exposures during pregnancy was linked to a 2.5 percent increased risk of term low birth weight (Laurent et al. 2014). The second study evaluated PM2.5 exposures by source, and found increased odds of term low birth weight with increased exposure to PM2.5 from diesel sources, gasoline, geological sources, as well as elemental carbon (Wilhelm et al. 2012). Studies from the U.S., Brazil, Mexico, the Czech Republic, South Korea, Japan, and Taiwan have reported that neonatal and early postnatal exposure to particulate matter may lead to increased infant mortality (U.S. EPA 2009). Among these studies, one was conducted in Southern California, and found increased risks for deaths among infants between one and 12 months old associated with exposures to particulates and other pollutants; however, no effect was seen for neonatal mortality (defined as mortality in the first month after birth) (Ritz et al. 2006). Some newer research has also linked particulate matter exposures to risk of certain birth defects and stillbirth. A California-based study used monitoring station data and traffic density measures to evaluate potential associations with a variety of birth defects in the San Joaquin Valley (Padula et al. 2013a; Padula et al. 2013b; Padula et al. 2013c; Padula et al. 2015). One of these studies reported evidence suggesting that PM10 and PM2.5 may increase the risk of certain congenital heart defects (Padula et al. 2013b). For neural tube defects, increased risks were linked to higher exposures to carbon monoxide and nitrogen oxide (Padula et al. 2013a), but higher risks for spina bifida with PM10 exposures were found only among mothers living in lower socioeconomic status neighborhoods (Padula et al. 2015). An earlier study conducted in Los Angeles County used ambient monitoring data to estimate exposures, and reported increased risk of certain congenital heart defects with higher exposures to carbon monoxide, but not for PM10; PM2.5 was not evaluated in this study (Ritz et al. 2002). A couple of recent studies evaluated PM2.5 exposures during gestation and risk of stillbirth. A recent study conducted in Ohio used monitoring station data

to evaluate stillbirth risk, and found that higher levels of PM2.5 exposure in the third trimester was linked to a 42 percent increased risk of stillbirth (DeFranco et al. 2015). A California-based study similarly found an increased risk of stillbirth with higher PM2.5 exposures averaged over the entire pregnancy, but the association may have been confounded by co-occurring nitrogen dioxide exposures (Green et al. 2015). A third study, conducted in Taiwan, found that higher PM10 and sulfur dioxide exposures in the first trimester were associated with increased risk of stillbirth among babies who were born preterm; PM2.5 was not assessed in this study (Hwang et al. 2011).

In the U.S. EPA review, it was noted that stronger associations with birth weight reductions are observed with PM2.5 compared to PM10, and animal toxicological studies provide supportive evidence, although a specific mechanism is not known (U.S. EPA 2009). These results and many other studies provide evidence that fetuses and infants are subgroups affected by particulate matter exposures.

Neurological Health Outcomes

A 2012 review conducted by a panel of research scientists convened by the National Institute of Environmental Health Sciences identified several studies that reported links between outdoor air pollution and central nervous system effects, such as decreased cognitive function, Alzheimer's disease, Parkinson's disease, and impacts on behavioral testing and development in childhood (Block et al. 2012). Toxicological studies suggest that the damage may be caused through an oxidative stress pathway, and demonstrate that PM can be inhaled into the lungs and translocated to the brain, and that ultrafine particles to reach the brain through the olfactory nerve (Peters et al. 2006). Some more recent studies have evaluated neurological impacts of PM, ranging from studies of older adults to prenatal exposures. The Normative Aging Study evaluated older men in Boston, MA, and reported an association between black carbon (a marker of traffic exhaust) and cognitive function, as measured through cognitive tests (Power et al. 2011). A study conducted in the Los Angeles Basin used monitoring data to evaluate long-term exposures in a middle-aged and older adult population, and reported PM2.5 exposure was associated with decreased verbal learning (Gatto et al. 2014). A study of school children in Spain reported that children attending schools with higher levels of air pollution, as measured by elemental carbon (a marker of diesel exhaust), NO_2, and ultrafine particles, experienced smaller growth in several cognitive measures (Sunyer et al. 2015). Three recent studies reported that PM2.5 exposures during the prenatal period were associated with autism in childhood. One study was conducted in Los Angeles County, and reported that 7 percent increased odds of autism with a 4.68 $\mu g/m^3$ increase in PM2.5; the effect estimate increased to 15 percent when accounting for ozone in the statistical models (Becerra et al. 2013). A California-based study found that an 8.7 $\mu g/m^3$ increase in PM2.5 during the prenatal period or in the first year of life doubled the odds of autism (Volk et al. 2013). The third study was based on the Nurses' Health Study II cohort, and reported an increased risk of autism with prenatal PM2.5 exposures, but not with exposures before pregnancy or after delivery (Raz et al. 2015). These studies provide emerging evidence of health effects of air pollution on neurological health outcomes.

Metabolic Syndrome

Metabolic syndrome, which is the clustering of several known risk factors for cardiovascular disease (Huang 2009), is a relatively new health outcome to be studied in relation to air pollution exposure. The U.S. EPA 2009 ISA reviewed only one epidemiological study and one toxicological study. These studies provided some evidence that particulate matter exposures may be linked to markers of metabolic syndrome, such as insulin resistance, hypertension, high cholesterol, or obesity, or that having a metabolic syndrome may increase susceptibility to the effects of PM10 exposures on cardiovascular outcomes (U.S. EPA 2009). More recently, a Swiss epidemiological study reported that long-term PM10 exposures were associated with increased risk of metabolic syndrome (Eze et al. 2015). Two other human studies found that people with metabolic syndrome exposed to particulate matter air pollution experienced cardiovascular effects and worsening insulin resistance (Devlin et al. 2014; Brook et al. 2016). Some recent animal studies have also reported impacts of PM on the development of obesity and metabolic syndrome, and that animals with pre-existing metabolic syndrome may be more sensitive to the cardiovascular effects of PM exposure (Brocato et al. 2014; Wagner et al. 2014; Wei et al. 2016).

Ultrafine Particles

As noted above, numerous studies have found associations between particulate matter levels and adverse health effects, including mortality, hospital admissions, and respiratory disease symptoms. The vast majority of these studies used particle mass of PM10, PM2.5, or PM10-2.5 as the measure of exposure. Some researchers have postulated, however, that ultrafine particles may be responsible for some of the observed associations of particulate matter and health outcomes (Oberdorster et al. 1995; Seaton et al. 1995). Ultrafine particles are typically defined as particles with aerodynamic diameters of less than 0.1 µm or 100 nm. Ultrafine particles are formed as a result of combustion processes as well as secondary atmospheric transformations. Vehicle emissions, especially diesel exhaust, are major sources of ultrafine particles; therefore, proximity to a major roadway is an important factor that affects an individual's exposure to ultrafine particles (Zhu et al. 2002; HEI Review Panel on Ultrafine Particles 2013). There is currently no federal or California standard for ultrafine particles.

U.S. EPA staff has presented conclusions on causal determination of several health effects of ultrafine PM based on a recent review of the available scientific studies (U.S. EPA 2009). These causal determinations are depicted in Table I-9.

TABLE I-9

Summary of U.S. EPA's Causal Determination of Ultrafine PM by Exposure Duration and Health Outcome

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular effects	Suggestive of a causal relationship
Respiratory effects	Suggestive of a causal relationship
Central nervous system	Inadequate to infer a causal relationship
Mortality	Inadequate to infer a causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular effects	Inadequate to infer a causal relationship
Respiratory effects	Inadequate to infer a causal relationship
Mortality	Inadequate to infer a causal relationship
Reproductive and developmental	Inadequate to infer a causal relationship
Cancer, Mutagenicity, Genotoxicity	Inadequate to infer a causal relationship

(From (U.S. EPA 2009) Table 2-4 and Chapters 6 and 7)

In 2013, a review of the health effects of ultrafine particles concluded that current available evidence does not support that exposures to ultrafine particles alone account for the adverse health effects that have been associated with other ambient pollutants such as PM2.5, although the report noted several limitations in the exposure data relating to ultrafine particles (HEI Review Panel on Ultrafine Particles 2013). However, a more recent assessment of the studies published since that time suggest that UFP's may be more harmful compared to health compared to PM10 and PM2.5 (Li et al. 2016). Several potential mechanisms have been brought forward to suggest that the ultrafine portion may be important in determining the toxicity of ambient particulates, some of which are discussed below.

Smaller particles can also be inhaled deeper into the lungs, although the relationship between deposition fraction and particle size is complex. The ultrafine particles between 20-30 nm generally have higher fractional deposition in the alveolar region of the lung, where air exchange takes place. Because ultrafine particles are cleared from the lung more slowly compared to larger particles, the ultrafine particles can accumulate in the lung tissue where they can also translocate into the blood and to other organs (HEI Review Panel on Ultrafine Particles 2013). Ultrafine particles can also enter the brain tissues through the olfactory nerve (Peters et al. 2006). For a given mass concentration, ultrafine particles have much higher numbers of particles and surface area compared to larger particles. Particles can act as carriers for other adsorbed agents, such as trace metals and organic

compounds; and the larger surface area may transport more of such toxic agents than larger particles. Combined with the slower clearance of UFP's from the alveolar region of the lung, these small particles can deliver a greater amount of toxics to this part of the lung, causing increased inflammation (Li et al. 2016).

Exposures of laboratory animals to ultrafine particles have found cardiovascular and respiratory effects. Using an animal model of atherosclerotic disease, mice exposed to concentrated ultrafine particles (defined as less than 0.18 µm) near a roadway in Southern California showed larger early atherosclerotic lesions than mice exposed to concentrated PM2.5 or to filtered air (Araujo et al. 2008). In a mouse allergy model, exposures to concentrated ultrafine particles (less than 0.18 µm) resulted in a greater response to antigen challenge to ovalbumin (Li et al. 2010), indicating that vehicular traffic exposure could exacerbate allergic inflammation in already-sensitized animals. More specifically, ambient UFP's with a higher polycyclic aromatic hydrocarbon (PAH) content and higher oxidant potential triggered greater allergic inflammation in mice compared to a mixture of fine and ultrafine particles (Li et al. 2009). A related study identified specific proteins that are up-regulated among the exposed mice, which were proteins involved in allergic airway inflammation and immune system response (Kang et al. 2010). These results suggest that UFP's may play a role in the development or exacerbation of asthma, and point to an oxidative stress pathway. Additionally, some experiments using engineered nanoparticles found that the particle exposure led to a suppressed immune response to infections (Li et al. 2016).

Controlled exposures of human volunteers to ultrafine particles either laboratory-generated or as products of combustion, such as diesel exhaust containing particles, have found physiological changes related to vascular effects. Mills et al., for example found exposure to diesel exhaust particulate at 300 $\mu g/m^3$ attenuated both acetylcholine and sodium-nitroprusside-induced vasorelaxation (Mills et al. 2011). These exposures were higher than typical ambient concentrations, although the authors state that such concentrations can be found regularly in heavy traffic, occupational settings, and in some of the most polluted cities in the world. This study showed that diesel exhaust particulates had impacts on vascular function while carbon nanoparticles did not change vascular function, providing evidence that is complementary to the epidemiological studies linking particulate matter exposure to cardiovascular outcomes. Several other human exposures studies have reported effects of UFP's on inflammatory markers, lung function, heart rate and heart rate variability, including effects on people with asthma, diabetes, or metabolic syndrome (Li et al. 2016).

There is a lack of long-term studies of human population exposure to ultrafine particles, as there is currently no ultrafine monitoring network in the U.S. As noted above, however, a recent study from California estimated exposures to PM2.5 and ultrafine particles among members of the California Teachers Study cohort. Positive, statistically significant associations of ischemic heart disease mortality were observed with modeled PM2.5 and with ultrafine particle mass concentrations derived from chemical transport models using California emissions inventories (Ostro et al. 2015). Other epidemiological studies have reported links between UFP exposures both indoors and

outdoors with decreased microvascular function and increased systemic inflammation in adults (Karottki et al. 2014; Olsen et al. 2014), and with oxidative DNA damage in children (Song et al. 2013).

There have been several cross-sectional epidemiological studies of ultrafine particles, mainly from Europe. Some of these studies found effects on hospital admissions and emergency department visits for respiratory and cardiovascular effects, whereas other studies did not find such effects (U.S. EPA 2009). A recent study conducted in Rochester, NY reported that ambient UFP exposures in the prior week were associated with increased risk of asthma-related medical visits indicative of asthma exacerbation; the study did not find associations with accumulation mode PM, PM2.5, black carbon, or sulfur dioxide (Evans et al. 2014). Concentrations of ultrafine particles can vary geographically, and it is not clear how well the central-site monitors used in these studies reflect actual exposures.

Additional discussion on the sources and health effects of ultrafine particles can be found in Chapter 9 of the 2012 AQMP.

Sensitive Populations for PM-Related Health Effects

Certain populations may be more sensitive to the health effects of particulate air pollution, and evidence to assess susceptibility comes from epidemiological, controlled human exposure, and toxicological studies of PM2.5 and PM10 exposures. The U.S. EPA 2009 ISA for PM concluded that there is evidence supporting increased susceptibility to the effects of PM among children (for respiratory effects) and older adults (for cardiovascular effects), individuals with pre-existing cardiovascular or respiratory conditions, individuals with lower socioeconomic status (sometimes assessed using proxy measures such as educational attainment or residential location), and individuals with certain genetic polymorphisms that control antioxidant response, regulate enzyme activity, or regulate procoagulants (U.S. EPA 2009). In addition, there is some limited evidence that additional factors may increase a person's susceptibility to PM health effects, including chronic inflammatory conditions (e.g. diabetes, obesity) and life stage, with pregnant women and fetuses *in utero* being potentially more susceptible. Table I-10 summarizes the U.S. EPA's 2009 ISA assessment of susceptibility factors for particulate matter.

TABLE I-10

Summary of Evidence for Potential Increased Susceptibility to PM-Related Health Effects

Assessment of Evidence	Potential At Risk Factor
Increased susceptibility to PM	Older Adults (≥65 years) Children (<18 years) Genetic factors Cardiovascular diseases Respiratory illnesses Socioeconomic status (SES) Educational attainment (surrogate of SES) Residential location (surrogate of SES)
Increased susceptibility to PM, but limited studies available	Pregnancy and developmental effects Diabetes Obesity Health status, e.g. nutrition (surrogate of SES)
Did not increase susceptibility to PM	Gender Race/ethnicity
Did not increase susceptibility to PM, but limited studies available	Respiratory contributions to cardiovascular effects

Adapted From (U.S. EPA 2009) Table 8-2

Summary - Particulate Matter Health Effects

A considerable body of scientific evidence from epidemiologic, controlled human exposure and toxicological studies support the causal determinations for particulate matter and several categories of health endpoints, with the strongest evidence supporting a causal relationship for PM2.5 exposures with cardiovascular effects and mortality. Specific cardiovascular effects include cardiovascular deaths, hospital admissions for ischemic heart disease and congestive heart failure, changes in heart rate variability and markers of oxidative stress, and markers of atherosclerosis. The scientific evidence also supported a likely causal relationship for PM2.5 exposure with respiratory effects, such as hospital admissions for COPD or respiratory infections, asthma development, asthma or allergy exacerbation, lung cancer, impacts on lung function, lung inflammation, oxidative stress, and airway hyperresponsiveness. Both short-term and long-term particulate matter exposures are linked to health effects in humans. Young children, older adults, and people with pre-existing respiratory or cardiovascular health conditions are among those who may be more susceptible to the adverse effects of PM.

Estimates of the Health Burden of Particulate Matter in the South Coast Air Basin

In terms of estimating health burdens of air pollution exposure, CARB has conducted analyses in the past estimating exposures and quantitative health effects from exposures to particulate matter as well as other pollutants. A recent assessment focused on premature mortality and PM2.5, and

estimated the deaths associated with exposures above 5.8 µg/m^3, which is an estimate of background PM2.5 (California Air Resources Board 2010a). The analysis used the U.S. EPA's risk assessment methodology for calculating premature mortality and used ambient air quality measurements averaged over a three-year period of 2006-2008. An update to this analysis using ambient air quality data from 2009-2011 indicated that PM2.5-related premature deaths in California due to cardiopulmonary causes as 7,200 deaths per year with an uncertainty range of 5,600 – 8,700. Estimates were also made for the California Air Basins. For the South Coast Air Basin, the estimate was 4,000 cardiopulmonary deaths per year with an uncertainty range of 3,200–4,900. These estimates were calculated using the associations of cardiopulmonary mortality and PM2.5 from the second exposure period from Krewski (Krewski et al. 2009).

Another analysis of health impacts in the South Coast was conducted as part of the Socioeconomic Report for the 2012 AQMP. The analysis estimated the anticipated costs and benefits of adopting the measures in the Final 2012 AQMP, which included the projected public health benefits associated with lower PM2.5 concentrations as a result of the 2012 plan (South Coast Air Quality Management District 2012). Based on that analysis, the projected annual number of averted deaths due to PM2.5 reductions from the 2012 AQMP was 668 deaths in year 2014, and 275 deaths in year 2023. In addition, estimated numbers of health conditions prevented per year due to the 2012 AQMP were shown for several other health endpoints, including respiratory and cardiovascular outcomes. The estimates of cases averted in year 2014 were 597 cases of acute bronchitis, 29 to 261 non-fatal heart attacks, 18,384 person-days for lower and upper respiratory symptoms, 153 respiratory emergency room visits, 151 hospital admissions, 287,447 person-days of minor restricted activity, 48,805 work loss days, and 26,910 person-days of asthma attacks. Importantly, these estimates of prevented mortality and morbidity should not be compared to the estimates of deaths attributable to PM2.5 conducted by CARB, because these analyses are intended to answer different questions. The SCAQMD estimates address the question of "how many cases are averted due to the adoption of the 2012 AQMP?" while the CARB estimates address the question of "how many deaths are attributable to PM2.5 exposures above 5.8 µg/m3?". Both analyses provide important information regarding the health impacts of PM2.5.

NITROGEN DIOXIDE

Nitrogen dioxide (NO_2) is a gaseous air pollutant that serves as an indicator of gaseous oxides of nitrogen, such as nitric oxide (NO) and other related compounds (NO_x). These gases can undergo photochemical reactions to form ground-level ozone, and are important contributors to ozone pollution levels in the SCAB. Evidence of the health effects of NO_2 is derived from human and animal studies, which link NO_2 with respiratory effects such as decreased lung function and increases in airway responsiveness and pulmonary inflammation (U.S. EPA 2016). The U.S. EPA in 2010 retained the existing standards of 53 ppb for NO_2 averaged over one year, and adopted a new short-term standard of 100 ppb (0.1 ppm) averaged over one hour. The standard was designed to protect against increases in airway reactivity in individuals with asthma based on controlled exposure studies, as well as respiratory symptoms observed in epidemiological studies. The revised standard also requires additional monitoring for NO_2 near roadways.

In the current U.S. EPA Integrated Science Assessment for Nitrogen Oxides (U.S. EPA 2016), the staff conclusion for causal relationships between exposures and health effects are shown in the following table.

TABLE I-11

Summary of U.S. EPA's Causal Determination for Health Effects of Nitrogen Dioxide

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Respiratory effects	Causal relationship
Cardiovascular and related metabolic effects	Suggestive of a causal relationship
Total mortality	Suggestive of a causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Respiratory effects	Likely to be a causal relationship
Cardiovascular and related metabolic effects	Suggestive of a causal relationship
Reproductive and developmental effects	Fertility, Reproduction, and Pregnancy: Inadequate to infer a causal relationship Birth Outcomes: Suggestive of a causal relationship Postnatal Development: Inadequate to infer a causal relationship
Total Mortality	Suggestive of a causal relationship
Cancer	Suggestive of a causal relationship

(From (U.S. EPA 2016), Table ES-1)

Since the previous U.S. EPA Integrated Science Assessment (ISA) for Nitrogen Oxides from 2008, the causal determination for short-term and long-term respiratory effects have been updated in the 2016 ISA to reflect the stronger evidence now available pointing to a causal or likely causal relationship. For non-respiratory outcomes, the U.S. EPA also updated their assessment of the weight of evidence to show that the evidence for several short- and long-term outcomes is suggestive, but not sufficient to infer a causal relationship. Evidence for low-level nitrogen dioxide (NO_2) exposure effects is derived from laboratory studies of asthmatics and from epidemiological studies. Additional evidence is derived from animal studies. In the 2016 ISA, the U.S. EPA cited the coherence of the results from a variety of studies, and a plausible biological mechanism (whereby NO_2 reacts with the respiratory lining and forms secondary oxidation products that increase airway responsiveness and allergic

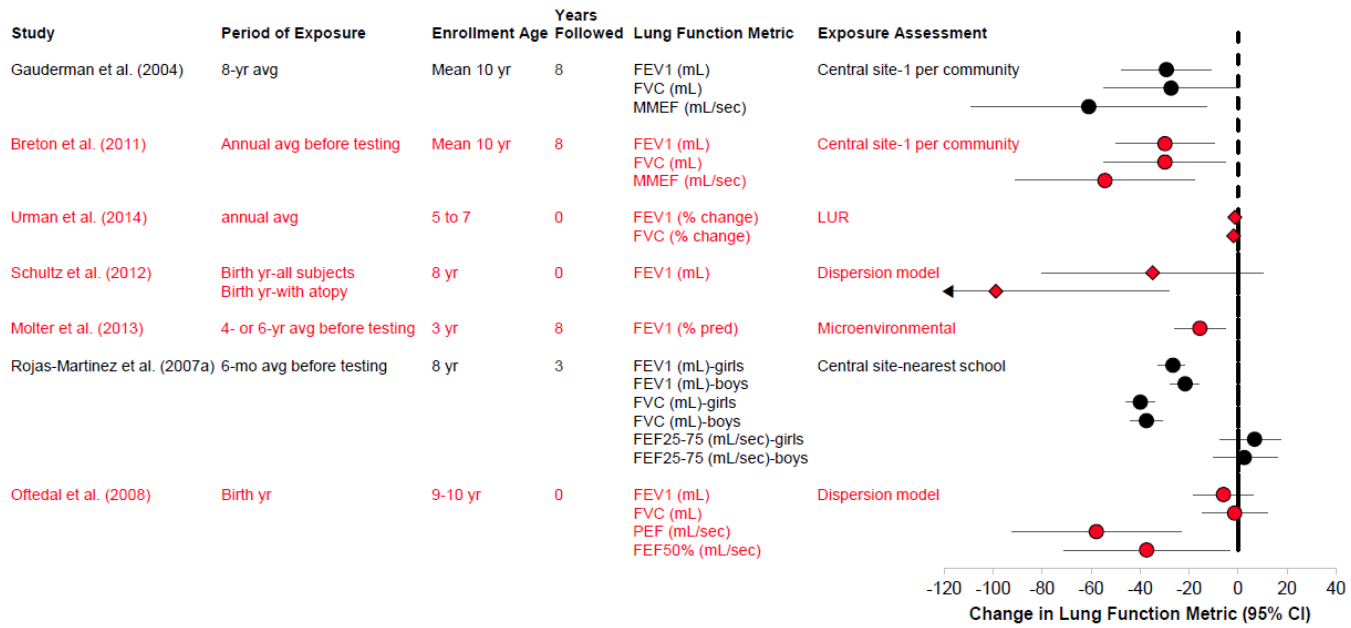
inflammation) to support the determination of a causal relationship between short-term NO_2 exposures and asthma exacerbations ("asthma attacks"). The long-term link with respiratory outcomes was strengthened by recent experimental and epidemiological studies, and the strongest evidence available is from studies of asthma development.

Several studies related to outdoor exposure have found health effects associated with ambient NO_2 levels, including respiratory symptoms, respiratory illness, decreased lung function, pulmonary inflammation, increased emergency room visits for asthma, and cardiopulmonary mortality. However, since traffic exhaust is an important source of NO_2 and several other pollutants, such as particulate matter, exposure generally occurs in the presence of other pollutants, making it more difficult for these studies to distinguish the specific role of NO_2 in causing effects independent of other pollutants. However, studies linking NO_2 to asthma exacerbations and human experimental studies provided support for the U.S. EPA determination that this causal relationship exists for short-term NO_2 exposures independent of other traffic-related pollutants (U.S. EPA 2016). The report also concludes that epidemiological studies do not rule out the possible influence of other traffic-related pollutants on the observed health effects.

The Children's Health Study in Southern California has evaluated a variety of health endpoints in relation to air pollution exposures, including lung function, lung development, school absences, and asthma. The study found associations between long-term exposure to air pollution, including NO_2, PM10, and PM2.5, and respiratory symptoms in asthmatic children (McConnell et al. 1999). Particles and NO_2 levels were correlated, and independent effects of individual pollutants could not be discerned. A subsequent analysis using more refined exposure estimation methods indicated consistent associations between long-term NO_2 exposures and respiratory symptoms in children with asthma (McConnell et al. 2003).

Ambient levels of NO_2 were also associated with a decrease in lung function growth in a group of children followed for eight years, including children with no history of asthma. In addition to NO_2, the decreased growth was also associated with particulate matter and airborne acids. The study authors postulated this may be a result of a package of pollutants from traffic sources (Gauderman et al. 2004).

A number of studies have since reported deficits in lung function associated with nitrogen oxides exposures. Examples are shown in Figure I-8.



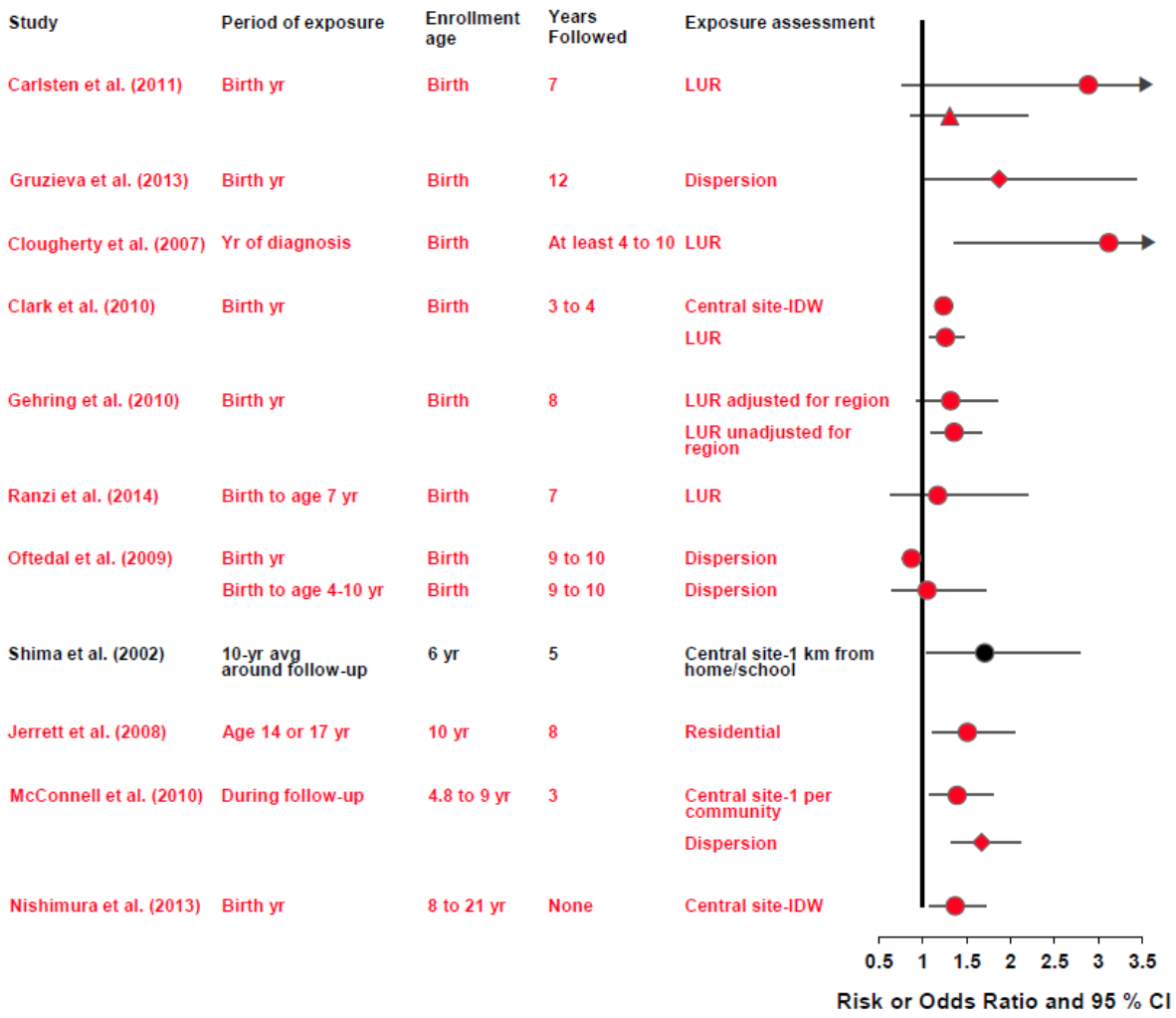
Note: Studies in red are recent studies. Studies in black were included in the 2008 ISA for Oxides of Nitrogen. Circles = NO_2; Diamonds = NO_x. All mean changes in this plot are standardized to a 10-ppb increase in NO_2 and a 20-ppb increase in NO_x concentration. Effect estimates from studies measuring NO_x in $\mu g/m_3$ (Schultz et al., 2012) have not been standardized.

FIGURE I-8

Associations of nitrogen dioxide (NO_2) or the sum of nitric oxide and NO_2 (NO_x) with lung function indices from prospective studies of children (From (U.S. EPA 2016), Figure 6-5).

A follow-up report from the Children's Health Study has assessed whether improving air quality in Southern California over the past several decades has led to beneficial changes in health among children (Gauderman et al. 2015). It was reported that as the levels of nitrogen oxide and fine particulates came down as the result of air pollution emissions reductions, the deficits in lung function growth were also of a smaller magnitude. Such improvements were observed in children with asthma as well as in those without asthma. These results indicate that improvements in air quality are associated with improvements in children's health.

In recent years, the most compelling evidence of long-term effects of NO_2 has been from prospective cohort studies that link NO_2 exposures to the development of asthma, primarily in children. The U.S. EPA included several recent studies in their review, as shown in the Figure I-9. The vast majority of these studies found that higher NO_2 exposures were linked to an increased risk or odds of developing asthma among children.



Effect estimates are standardized to a 10-ppb increase in NO_2, with the exception of Gruzieva et al. (2013) who examined NOx in µg/m3 and Oftedal et al (2009) who did not report increments for the effect estimates for the birth to age 4 years or birth to age 10 years exposure periods. Note: Black symbols = studies evaluated in the 2008 Integrated Science Assessment for Oxides of Nitrogen; Red symbols = recent studies. Circles=NO_2; triangles=NO; diamonds=NOx.

FIGURE I-9

Associations of ambient nitrogen dioxide (NO_2) concentrations with asthma incidence in longitudinal cohort studies of children (From (U.S. EPA 2016), Figure 6-1).

Among the studies of childhood asthma incidence reviewed in the 2016 U.S. EPA ISA for Oxides of Nitrogen, two studies were conducted in Southern California. Both studies were based on the Children's Health Study cohort, but one study used a smaller subset of the cohort and estimated NO_2 exposures using monitors at the children's homes (Jerrett et al. 2008). The second study examined over 2000 children and used data from air monitoring stations as well as modeled NO_2 levels to estimate exposures (McConnell et al. 2010). Both studies found a positive association between NO_2 exposures and the onset of asthma in these children, however, because NO_2 is often strongly

correlated with PM2.5 and other components of traffic-related air pollution, it is possible that the effects observed are due to some other component of traffic exhaust for which NO_2 serves as a proxy measure. The consistency of the effects found linking NO_2 exposure and asthma development in children, the use of prospective longitudinal study designs following children for several years, and the use of several different methods to estimate exposures are noted strengths of such studies. Experimental studies have found that NO_2 exposures increase responsiveness of airways, pulmonary inflammation, and oxidative stress, and can lead to the development of allergic responses. These biological responses provide evidence of a plausible mechanism for NO_2 to cause asthma.

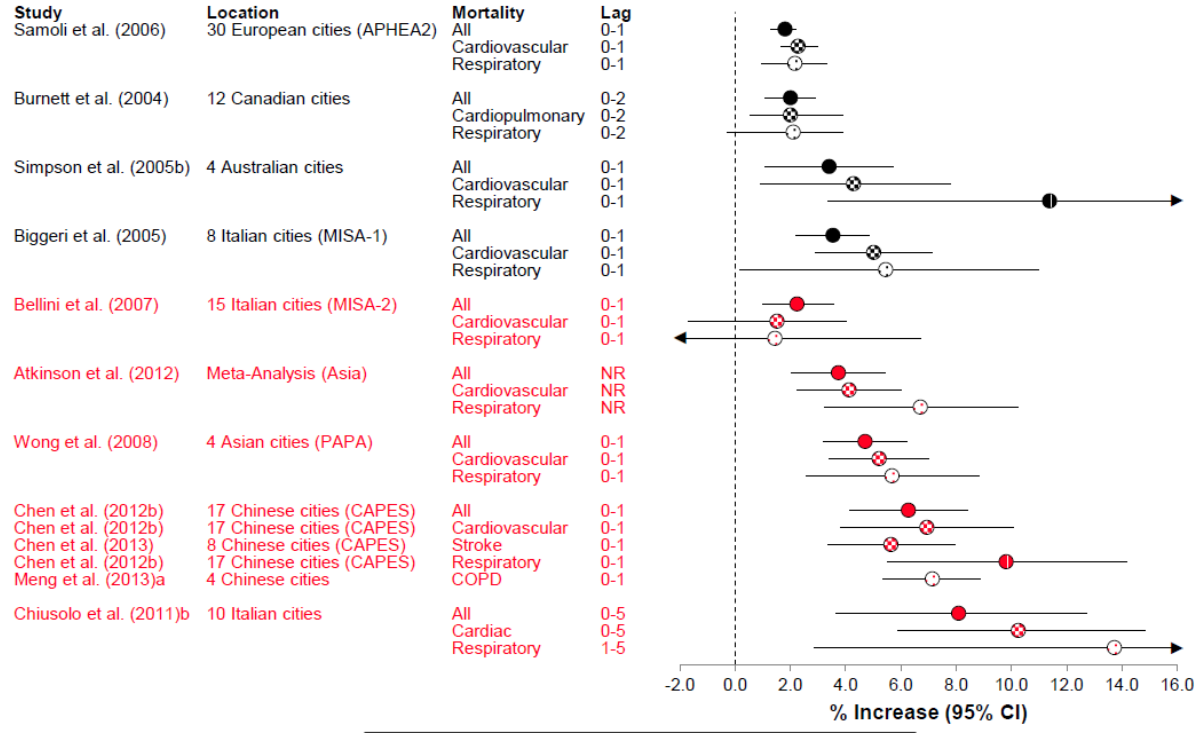
Results from controlled exposure studies of asthmatics demonstrate an increase in the tendency of airways to contract in response to a chemical stimulus (airway responsiveness) or after inhaled allergens (U.S. EPA 2016). Effects were observed among adult volunteers with asthma when exposed to 100 ppb NO_2 for 60 minutes and to 200-300 ppb for 30 minutes, with approximately 70 percent of study participants experiencing an increase in airway responsiveness. A similar response was reported in some studies with healthy subjects at higher levels of exposure (1.5 - 2.0 ppm), although these changes in healthy adults are likely of little or no clinical significance. Increased airway responsiveness among people with asthma can lead to worse symptoms and reduced lung function. Mixed results have been reported from controlled human exposure studies of people with chronic obstructive lung disease, with some studies reporting no change in symptom score while other studies reporting increased symptom scores when participants were exposed to NO_2 while exercising (U.S. EPA 2016).

Short-term controlled studies of rats exposed to NO_2 over a period of several hours indicate cellular changes associated with allergic and inflammatory responses that can lead to liver damage and reduced hepatic function. Rodent models exposed to NO_2 repeatedly for 4 to 14 days demonstrated increased airway responsiveness with high levels of exposure (4000 ppb). Animal studies also provide evidence that NO_2 exposures have negative effects on the immune system, and therefore increase the host's susceptibility to respiratory infections. Epidemiological studies showing associations between NO_2 levels and hospital admissions for respiratory infections also support such a link (U.S. EPA 2016).

Several epidemiological studies conducted in California have examined associations between NO_2 exposures and other health effects, including some recent studies evaluating cardiovascular effects (Coogan et al. 2012; Bartell et al. 2013; Wittkopp et al. 2013), mortality (Lipsett et al. 2011; Bartell et al. 2013; Jerrett et al. 2013), birth outcomes (Ghosh et al. 2012; Laurent et al. 2014; Padula et al. 2014; Ritz et al. 2014; Green et al. 2015), and cancer (Ghosh et al. 2013). Many studies conducted in other geographic areas have also found links with these health outcomes, and the latest assessment by U.S. EPA is that the existing studies are suggestive of a causal relationship for some of these endpoints or inadequate to infer a causal relationship for other endpoints (U.S. EPA 2016). In addition, some of the newer outcomes evaluated in relation to NO_2 exposures include neurological outcomes such as Parkinson's disease (Ritz et al. 2016), Alzheimer's disease (Oudin et al. 2016), and autism (Becerra et al. 2013; Volk et al. 2013), as well as metabolic diseases such as diabetes and obesity (Coogan et al. 2012; Robledo et al. 2015; White et al. 2016). However, many of these studies

use NO_2 exposures as a proxy measure for traffic-related air pollutants, and do not aim to identify a specific pollutant within the mix of pollutants from this source. Thus, there is uncertainty on whether NO_2 exposure has independent relationships with non-respiratory related health effects, or whether NO_2 is simply a marker of near-road air pollution exposure, which includes a mixture of air pollutants, including some air toxics.

Examples of studies reporting an association of mortality with short-term NO_2 exposures are shown in the figure below.



Note: Black symbols = multicity studies evaluated in the 2008 Integrated Science Assessment for Oxides of Nitrogen; Red symbols = recent studies. Filled circle = total mortality; Crosshatch = cardiovascular mortality; Vertical lines = respiratory mortality.

FIGURE I-10

Percentage increase in total, cardiovascular, and respiratory mortality from multi-city studies for a 20-ppb increase in 24-hour average or 30-ppb increase in one-hour maximum nitrogen dioxide concentrations (From (U.S. EPA 2016), Figure 5-23).

SULFUR DIOXIDE

Sulfur dioxide (SO_2) is a gaseous air pollutant that has been linked to a variety of respiratory effects, such as decreased lung function and increased airway resistance. Controlled laboratory studies involving human volunteers have clearly identified asthmatics as a very sensitive group to the effects of ambient sulfur dioxide (SO_2) exposures. Healthy subjects have failed to demonstrate any short-term respiratory functional changes at exposure levels up to 1.0 ppm over 1-3 hours. In exercising asthmatics, brief exposure (5-10 minutes) to SO_2 at levels between 0.2-0.6 ppm can result in increases in airway resistance and decreases in breathing capacity. The response to SO_2 inhalation is

observable within two minutes of exposure, increases further with continuing exposure up to five minutes, then remains relatively steady as exposure continues. SO_2 exposure is generally not associated with any delayed reactions or repetitive asthmatic attacks (U.S. EPA 2008). In 2010, the U.S. EPA SO_2 air quality standard was set at 75 ppb (0.075 ppm) averaged over one hour to protect against acute asthma attacks in sensitive individuals.

The EPA assessment based on the 2008 Integrated Science Assessment for Sulfur Oxides is shown in the table below (U.S. EPA 2008). The U.S. EPA recently released a draft of the revised ISA for SO2 (U.S. EPA 2015a) which evaluates recent evidence assessing links to mortality and cardiovascular, respiratory, carcinogenic, and reproductive effects (Brunekreef et al. 2009; Hart et al. 2011; Pascal et al. 2013; Chen et al. 2014; Gianicolo et al. 2014; Milojevic et al. 2014; Moridi et al. 2014; Stingone et al. 2014; Straney et al. 2014; Wang et al. 2014; Winquist et al. 2014; Yang et al. 2014; Ancona et al. 2015; Green et al. 2015; Rich et al. 2015; Shah et al. 2015; Yorifuji et al. 2015).

TABLE I-12

Summary of U.S. EPA's Causal Determinations for Health Effects of Sulfur Oxides

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Respiratory morbidity	Causal relationship
Cardiovascular morbidity	Inadequate to infer a causal relationship
Mortality	Suggestive of a causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Respiratory morbidity	Inadequate to infer a causal relationship
Carcinogenic effects	Inadequate to infer a causal relationship
Prenatal and neonatal outcomes	Inadequate to infer a causal relationship
Mortality	Inadequate to infer a causal relationship

(From (U.S. EPA 2008) Chapter 3)

In epidemiologic studies of children and adults, associations of short-term variations in SO_2 levels with increases in respiratory symptoms, emergency department visits, and hospital admissions for respiratory-related causes have been reported. There is uncertainty as to whether SO_2 is associated with the effects or whether other co-occurring pollutants may explain the observed effects, although some studies indicated that the SO_2 effects remained even after accounting for the effects of other pollutants, including PM2.5. Coupled with the human clinical studies, these data suggest that SO_2 can trigger asthmatic episodes in individuals with pre-existing asthma (U.S. EPA 2008).

Animal studies have shown SO_2 effects on pulmonary inflammation with acute exposure at concentrations consistent with ambient SO_2 levels. Toxicological studies using animals found that repeated exposures to concentrations of SO_2 as low as 0.1 ppm promoted allergic sensitization and airway inflammation. Such evidence, combined with human clinical studies and epidemiological studies in people with asthma support the U.S. EPA determination of a causal relationship between short-term SO_2 exposure and respiratory morbidity. One of these studies was conducted in the Los Angeles area, and found that higher ambient SO_2 levels were associated with increased odds of asthma symptoms among Hispanic children with asthma (Delfino et al. 2003).

Some epidemiological studies indicate that the cardiovascular mortality effects associated with short-term exposures to ambient SO_2 were generally reduced when accounting for other pollutants, although the evidence is still suggestive of a causal relationship. Few epidemiological studies are available to assess the potential confounding effects of other co-occurring pollutants in studies of long-term effects. For example, there is some evidence that sulfates, which are formed when SO_2 oxidizes rapidly in the atmosphere, may be associated with lung function changes, although the evidence is not consistent (Reiss et al. 2007). Sulfates are positively correlated with SO_2 levels, so it is difficult to distinguish the effect of one individual pollutant. Based on a level determined necessary to protect the most sensitive individuals, the California Air Resources Board (CARB) in 1976 adopted a standard of 25 $\mu g/m^3$ (24-hour average) for sulfates. There is no federal air quality standard for sulfates.

CARBON MONOXIDE

Carbon monoxide (CO) is a gaseous air pollutant that has a high affinity to bond with oxygen-carrying proteins (hemoglobin and myoglobin). The resulting reduction in oxygen supply in the bloodstream is responsible for the toxic effects of CO, which are typically manifested in the oxygen-sensitive organ systems. The effects have been studied in controlled laboratory environments involving exposure of humans and animals to CO, as well as in population-based studies of ambient CO exposure effects. People with deficient blood supply to the heart (ischemic heart disease) are known to be susceptible to the effects of CO. Protection of this group is the basis of the existing National Ambient Air Quality Standards for CO at 35 ppm for one hour and 9 ppm averaged over eight hours. The health effects of ambient CO have been recently reviewed by U.S. EPA, with the strongest evidence supporting a likely causal link between short-term CO exposures and cardiovascular outcomes, although studies have linked both short-term and long-term CO exposures to several other health outcomes (Table I-13) (U.S. EPA 2010).

TABLE I-13

Summary of U.S. EPA's Causal Determinations for Health Effects of Carbon Monoxide

SHORT-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular morbidity	Likely to be a causal relationship
Central nervous system	Suggestive of a causal relationship
Respiratory morbidity	Suggestive of a causal relationship
Mortality	Suggestive of a causal relationship
LONG-TERM EXPOSURES	
Health Outcome	**Causality Determination**
Cardiovascular morbidity	Inadequate to infer a causal relationship
Central nervous system	Suggestive of a causal relationship
Birth outcomes and developmental effects	Suggestive of a causal relationship
Respiratory morbidity	Inadequate to infer a causal relationship
Mortality	Not likely to be a causal relationship

(From (U.S. EPA 2010) Table 2-1)

Inhaled CO has no known direct toxic effect on lungs but rather exerts its effects by interfering with oxygen transport—through the formation of carboxyhemoglobin (COHb, a chemical complex of CO and hemoglobin)), which reduces the amount of oxygen the blood can carry to the tissues. Exposure to CO is often evaluated in terms of COHb levels in blood, measured as percentage of total hemoglobin bound to CO. Endogenous COHb is estimated to be <1 percent in healthy individuals, but COHb levels are sensitive to health status and metabolic state, with higher levels among smokers and persons with inflammatory diseases. Estimates based on a large prospective study of adults conducted in the 1970s showed a dose-response relationship between the average number of cigarettes smoked per day and the COHb concentrations (never smokers: 1.59±1.72 percent, former smokers: 1.96±1.87 percent, 1-5 cigarettes/day: 2.31±1.94 percent, 6–14 cigarettes/day: 4.39±2.48 percent, 15–24 cigarettes/day: 5.68±2.64 percent, >=25 cigarettes/day: 6.02±2.86 percent) (Hart et al. 2006).

Under controlled laboratory conditions, healthy subjects exposed to CO sufficient to result in 5 percent COHb levels exhibited reduced duration of maximal exercise performance due to the inability to deliver sufficient oxygen to the heart and other muscles. Studies involving subjects with coronary artery disease who engaged in exercise during CO exposures have shown that COHb levels as low as

2.4 percent can lead to earlier onset of electrocardiograph changes indicative of deficiency of oxygen supply to the heart. Other effects of inadequate oxygen delivery to the body tissues include earlier onset of chest pain, increase in the duration of chest pain, headache, confusion and drowsiness (U.S. EPA 2000).

A number of epidemiological studies have found associations between short-term ambient CO levels and increased hospital admissions and emergency department visits for ischemic heart disease, including myocardial infarction (U.S. EPA 2010). In studies reporting results stratified by age and sex, larger effects were generally observed among older adults and among males. Examples of such studies, including information on number of days of lag time between exposure and hospital admissions for key cardiovascular outcomes, are shown in the figure below.

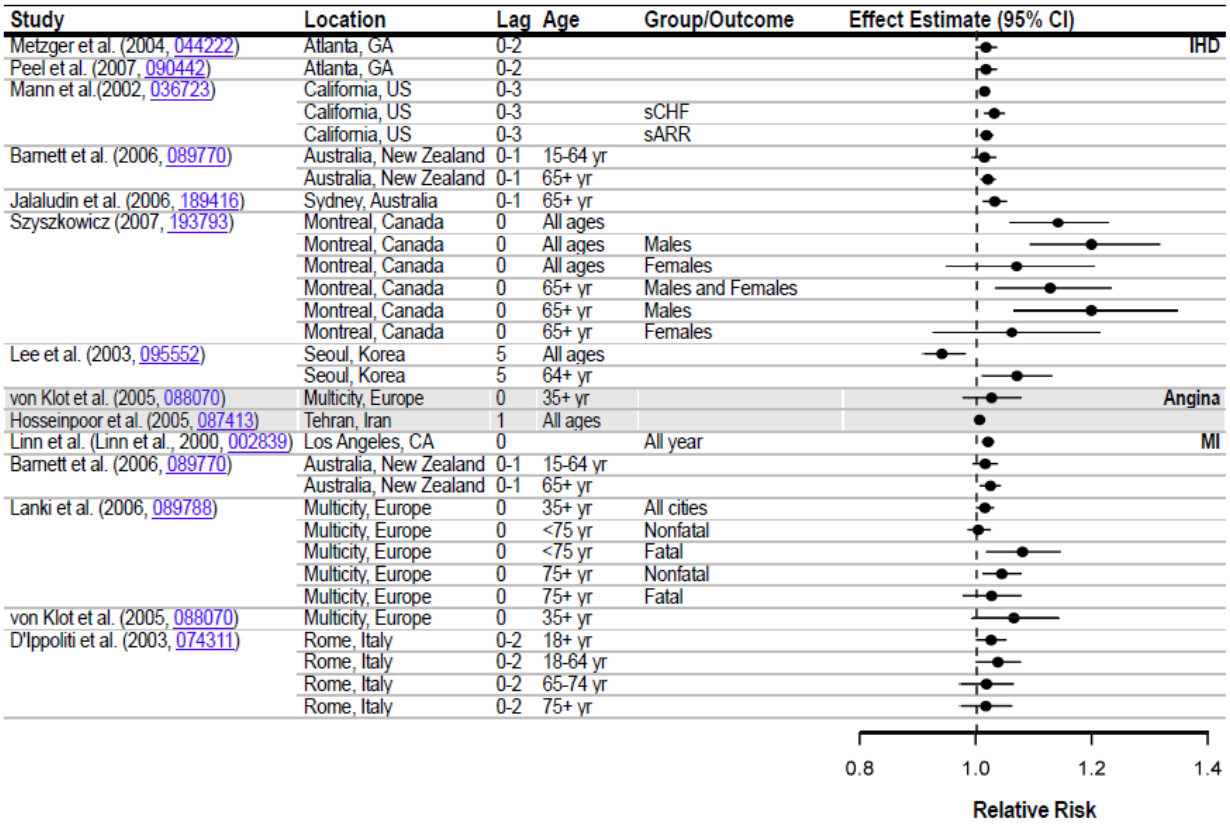


FIGURE I-11

Effect estimates (95 percent confidence intervals) associated with hospital admissions for various forms of heart disease. Effect estimates have been standardized to a 1 ppm increase in ambient CO for 1-h max CO concentrations, 0.75 ppm for 8-h max CO concentrations, and 0.5 ppm for 24-h average CO concentrations (From (U.S. EPA 2010), Figure 5-2). Lag time is the time between the exposure and the outcome measured. The closed circle on the diagram indicates the effect estimate, while the bar indicates the 95 percent confidence interval.

Research studies have also evaluated ambient CO exposures in relation to reproductive health outcomes. Epidemiological studies conducted in Southern California have reported an association

between with CO exposure during pregnancy and increases in pre-term births (Ritz et al. 2000; Wilhelm et al. 2005; Ritz et al. 2007). The increases in the pre-term births were also associated with PM10 or PM2.5 levels. There are very few studies examining CO exposure and birth defects, but one Southern California study found increased risks for cardiac-related birth defects with carbon monoxide exposure in the second month of pregnancy (Ritz et al. 2002). Toxicological studies in laboratory animals with higher than ambient levels of CO have also reported decrements in birth weight and prenatal growth, as well as impaired neurobehavior in the offspring of exposed animals (U.S. EPA 2010). The U.S. EPA concluded in their most recent review that the evidence linking long-term CO exposures with reproductive health outcomes was suggestive of a causal relationship.

LEAD

Lead (Pb) is a toxic air contaminant that is recognized to exert an array of deleterious effects on multiple organ systems. There are a number of potential public health effects at low level exposures, and there is no recognized lower threshold for health effects (U.S. EPA 2013a). The health implications are generally indexed by blood lead levels which are related to lead exposures both from inhalation as well as from ingestion. Effects include impacts on population IQ as well as heart disease and kidney disease. The initial air quality standard for lead was established by U.S. EPA in 1978 at a level of 1.5 µg /m^3 averaged over a calendar quarter. U.S. EPA revised the NAAQS for lead in 2008 to a level of 0.15 µg/m^3 averaged over a rolling three-month period to protect against lead toxicity. The SCAB's attainment status for lead is described in the draft 2016 AQMP Chapter 2.

The U.S. EPA has recently reviewed the health effects of ambient lead exposures in conjunction with an Integrated Science Assessment and a review of the NAAQS for lead (U.S. EPA 2013a; U.S. EPA 2015c). Lead can accumulate and be stored in the bone, and this lead in bone can be released into the blood when the bone is metabolized, which happens naturally and continuously. Blood lead is the most common measure of lead exposure, and it represents recent exposure and may be an indicator of total body burden of lead (U.S. EPA 2013a). The following table gives the summary of causality conclusions from the U.S. EPA review, which illustrates the wide range of health effects associated with lead exposure.

TABLE I-14

Summary of U.S. EPA's Causal Determinations for Health Effects of Lead

HEALTH OUTCOME	CAUSALITY DETERMINATION
Children - Nervous System Effects	
Cognitive Function Decrements	Causal relationship
Externalizing Behaviors: Attention, Impulsivity and Hyperactivity	Causal relationship
Externalizing Behaviors: Conduct Disorders in Children and Young Adults	Likely to be a causal relationship
Internalizing Behaviors	Likely to be a causal relationship
Auditory Function Decrements	Likely to be a causal relationship
Visual Function Decrements	Inadequate to infer a causal relationship
Motor Function Deficits	Likely to be a causal relationship
Adults – Nervous System Effects	
Cognitive Function Decrements	Likely to be a causal relationship
Psychopathological Effects	Likely to be a causal relationship
Cardiovascular effects	
Hypertension	Causal relationship
Subclinical Atherosclerosis	Suggestive of a causal relationship
Coronary Heart Disease	Causal relationship
Cerebrovascular Disease	Inadequate to infer a causal relationship
Renal Effects	
Reduced Kidney Function	Suggestive of a causal relationship
Immune System Effects	
Atopic and Inflammatory Response	Likely to be a causal relationship
Decreased Host Resistance	Likely to be a causal relationship
Autoimmunity	Inadequate to infer a causal relationship
Hemotologic Effects	
Decreased Red Blood Cell Survival and Function	Causal relationship
Altered Heme Synthesis	Causal relationship
Reproductive and Developmental Effects	
Development	Causal relationship
Birth Outcomes (low birth weight, spontaneous abortion)	Suggestive of a causal relationship
Male Reproductive Function	Causal relationship
Female Reproductive Function	Suggestive of a causal relationship
Cancer	
Cancer	Likely to be a causal relationship

(From (U.S. EPA 2013a) Table ES-1)

Children appear to be sensitive to the neurological toxicity of lead, with effects observed at blood lead concentration ranges of 2–8 µg/dL. No clear threshold has been established for such effects. According to the U.S. EPA review, the most important effects observed are neurotoxic effects in children and cardiovascular effects in adults. The effects in children include impacts on intellectual

attainment and school performance. Figure I-12 provides a summary of the lowest levels of blood lead that have been associated with certain neurological, hematological and immune effects in children.

Lowest Observed Effect Blood Lead Level	Neurological Effects	Hematological Effects	Immune Effects
30 µg/dL		Increased urinary δ-aminolevulinic acid	
15 µg/dL	Behavioral disturbances (e.g., inattention, delinquency) Altered electrophysiological responses	Erythrocyte protoporphyrin (EP) elevation	
10 µg/dL	Effects on neuromotor function CNS cognitive effects (e.g., IQ deficits)	Inhibition of δ-aminolevulinic acid dehydratase (ALAD) Pyrimidine-5′-nuclotidase (Py5N) activity inhibition	Effects on humoral (↑ serum IgE) and cell-mediated (↓ T-cell abundance) immunity
5 µg/dL	(???)	(???)	
0 µg/dL			

Note: Arrows depict cases where weight of overall evidence strongly substantiates likely occurrence of type of effect in association with blood-Pb concentrations in range of 5-10 µg/dL, or possibly lower, as implied by (???). Although no evident threshold has yet been clearly established for those effects, the existence of such effects at still lower blood-Pb levels cannot be ruled out based on available data.

Source: Adapted/updated from Table 1-17 of U.S. Environmental Protection Agency (1986a).

FIGURE I-12

Summary of Lowest Observed Effect Levels for Key Lead-Induced Health Effects in Children (From (U.S. EPA 2007), Table 3-1)

Figures I-12 and I-13, taken from the U.S. EPA review (U.S. EPA 2007), depict the health effects of lead in relation to blood levels. In the figure, the question marks indicate that there are no demonstrated threshold blood lead levels for health effects. The Centers for Disease Control (CDC) has recently revised their lead hazard information and replaced their level of concern for adverse effects of 10 µg/dL blood lead level with a childhood blood lead level reference value of 5 µg/dL to identify children and environments associated with lead-exposure hazards (Centers for Disease Control and Prevention 2016).

Figure I-13 provides a summary of the lowest levels of blood lead that have been associated with key health effects in adults. For adults, evidence supports a causal relationship between lead and increased blood pressure and hypertension, as well as coronary heart disease (myocardial infarction, ischemic heart disease, and heart rate variability). Other health effects among adults are also relatively high on the causal scale, including neurological, hematological, and renal effects.

Lowest Observed Effect Blood Lead Level	Neurological Effects	Hematological Effects	Cardiovascular Effects	Renal Effects
30 µg/dL	Peripheral sensory nerve impairment	Erythrocyte protoporphyrin (EP) elevation in males		Impaired Renal Tubular Function
20 µg/dL	Cognitive impairment			
15 µg/dL	Postural sway	Erythrocyte protoporphyrin (EP) elevation in females		
		Increased urinary δ-aminolevulinic acid		
10 µg/dL		Inhibition of δ-aminolevulinic acid dehydratase (ALAD)	Elevated blood pressure ↓	
5 µg/dL			(???)	Elevated serum creatine (↓ creatine clearance)
0 µg/dL				

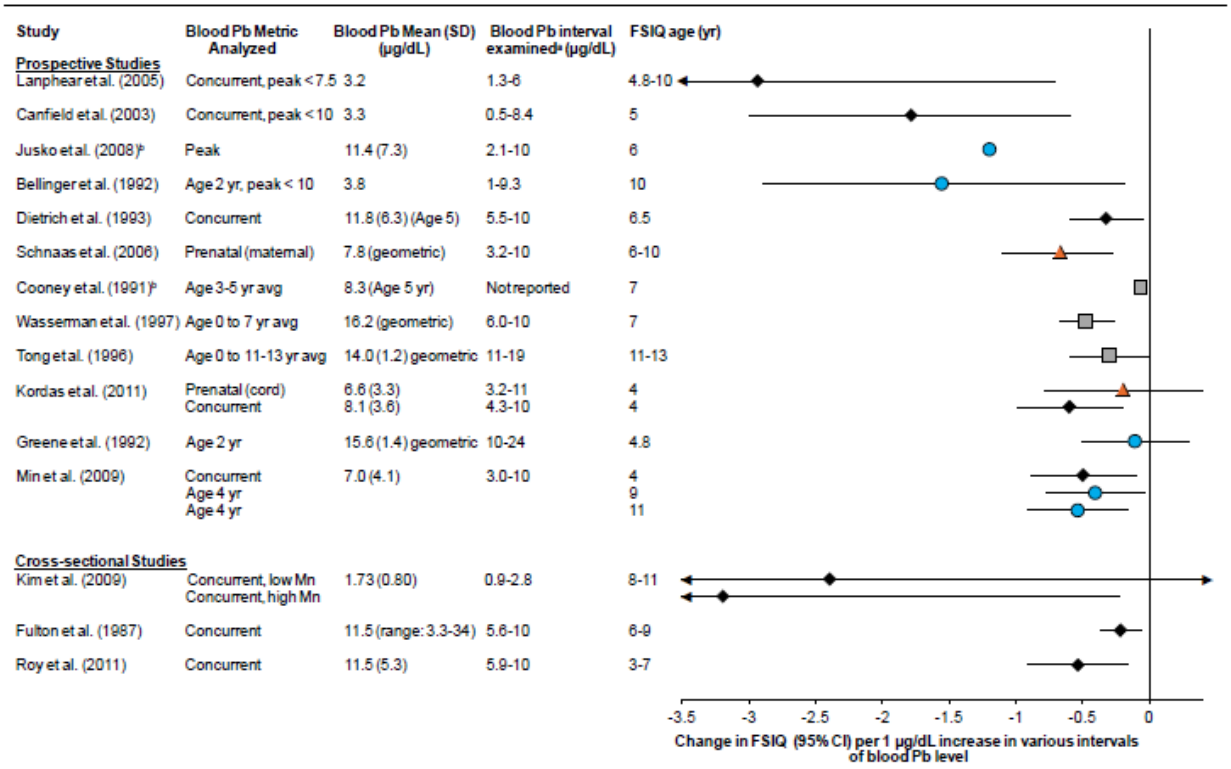
Note: Arrows depict cases where weight of overall evidence strongly substantiates likely occurrence of type of effect in association with blood-Pb concentrations in range of 5-10 µg/dL, or possibly lower, as implied by (???). Although no evident threshold has yet been clearly established for those effects, the existence of such effects at still lower blood-Pb levels cannot be ruled out based on available data.

Source: Adapted/updated from Table 1-16 of U.S. Environmental Protection Agency (1986a).

FIGURE I-13

Summary of Lowest Observed Effect Levels for Key Lead-Induced Health Effects in Adults (From (U.S. EPA 2007), Table 3-2)

In its most recent review of lead health effects, the U.S. EPA confirmed its previous conclusion regarding the cognitive decline in children as the most sensitive adverse effect associated with lead exposures. The effects as measured by a reduction in IQ from a number of studies are shown in the following figure. According to the review, the currently available evidence supports a median estimate of -1.75 IQ points for a change of 1 µg/dL blood lead to describe the neurocognitive impacts on young children (U.S. EPA 2015c).



[a]See Table 4-3 for explanation of the blood Pb level interval examined. Effect estimates were calculated for the lowest range examined in the study or the 10th percentile of blood Pb level to a blood Pb level of 10 µg/dL.
[b]Sufficient data were not available to calculate 95% CI.

Note: Mn = manganese. Results are presented for most of the cohorts examined in the literature and generally are grouped according to strength of study design, representativeness of the study population characteristics and blood Pb levels examined, and extent of consideration for potential confounding. There is not necessarily a continuum of decreasing strength across studies. Results usually are presented for the oldest age examined in cohorts. Multiple results from a cohort are grouped together. To facilitate comparisons among effect estimates across studies with different distributions of blood Pb levels and model structures (e.g., linear, log-linear), effect estimates are standardized to a 1 µg/dL increase for the lowest range of blood Pb levels examined in the study or the interval from the 10th percentile of blood Pb level to 10 µg/dL. For populations with 10th percentiles near or above 10 µg/dL, the effect estimate was calculated for the 10th to 90th percentile of blood Pb level. The percentiles are estimated using various methods and are only approximate values. Effect estimates are assumed to be linear within the blood Pb level interval evaluated. The various tests used to measure FSIQ are scored on a similar scale (approximately 40-160 FSIQ points). Black diamonds, blue circles, orange triangles, and gray squares represent effect estimates for concurrent, earlier childhood, prenatal, and lifetime average blood Pb levels, respectively. The horizontal lines associated with point estimates represent 95% confidence intervals (CI).

FIGURE I-14

Associations of Blood Pb Levels with Full-Scale IQ (FSIQ) in Children (From (U.S. EPA 2013a), Figure 4-2)

TOXIC AIR CONTAMINANTS

Toxic air contaminants are pollutants for which there generally are no ambient air quality standards. The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner, 1983) created California's first program to reduce exposures to air toxics by requiring CARB to adopt Air Toxics Control measures. Air Districts must either enforce these measures or adopt their own equally or more stringent measures. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly,

1987) supplements the earlier program by requiring air toxics inventories for certain facilities, notification of people's exposure to significant health risks, and facility plans to reduce these risks. Under California's Air Toxics Program, the Office of Environmental Health Hazard Assessment (OEHHA) assesses the health effects of substances that may pose a risk of adverse health effects, and CARB assesses the potential for humans to be exposed to these substances. These effects are usually an increased risk for cancer, adverse birth outcomes, or respiratory effects. After review by the state Scientific Review Panel, CARB holds a public hearing on whether to formally list substances that may pose a significant risk to public health as a Toxic Air Contaminant. Chapter 9 of the draft 2016 AQMP describes the Air Toxics Control Plan for the SCAQMD.

Air toxics include many different types of chemicals, and the discussion here will not address all air toxics in a comprehensive manner. However, this section will discuss very briefly diesel particulate matter and volatile organic compounds (VOC's), because diesel particulate matter is the most significant contributor to cancer risk in the South Coast Air Basin, and because some VOC's are air toxics, and are part of the control measures proposed in the current Air Quality Management Plan.

Diesel Particulate Matter

The California Air Resources Board listed diesel particulate matter as a Toxic Air Contaminant in 1998, based on the determination that it was a human carcinogen (California Air Resources Board 2010b). The International Agency for Research on Cancer, an arm of the World Health Organization, classified diesel exhaust as probably carcinogenic to humans in 1989 (International Agency for Research on Cancer 1989). More recently, IARC convened an international panel of scientists to review the published literature since the initial classification regarding the carcinogenicity of diesel combustion emissions. The panel concluded that diesel exhaust is a substance that causes lung cancer in humans (International Agency for Research on Cancer 2012b).

OEHHA also establishes potency factors for air toxics that are carcinogenic. The potency factors can be used to estimate the additional cancer risk from ambient levels of toxics. This estimate represents the chance of contracting cancer in an individual over a lifetime exposure to a given level of an air toxic and is usually expressed in terms of additional cancer cases per million people exposed.

SCAQMD conducted studies on the ambient concentrations and estimated the potential health risks from air toxics (South Coast Air Quality Management District 2000; South Coast Air Quality Management District 2008; South Coast Air Quality Management District 2015). In the latest SCAQMD Multiple Air Toxics Exposure Study, MATES IV, a one-year monitoring program was undertaken at 10 sites throughout the SCAB over the time period July 2012 – June 2013 (South Coast Air Quality Management District 2015). Over 30 substances were measured, which included the toxics that contributed the most to health risks in the Basin. The results showed that the overall lifetime risk for excess cancer from a 70-year lifetime exposure to the levels of air toxics calculated from the regional model was 367 in a million. This reflects a greater than 50 percent reduction in exposures and risks compared to the MATES III Study that was conducted from 2004 -2006. The largest contributor to this risk was diesel particulate matter, accounting for 68 percent of the air

toxics risk. The average measured levels were also compared to the non-cancer chronic Reference Exposure Levels (RELs), and found to be below the established RELs for the over 30 substances measured.

In 2015, OEHHA updated the calculation procedure to estimate cancer risks from air toxics exposures (Dodge et al. 2015). The revisions to the calculation methodology included accounting for higher risks attributable to early life exposures (up to age 16 years), updates to the population distribution of breathing rates by age, and a reduction in the time of household residence. In combination, these changes resulted in risk estimates in the MATES IV study to be about 2.5 times higher than the previous methodology employed in the MATES studies. The average lifetime risk for excess cancer cases is estimated to be 897 per million using the updated procedure (South Coast Air Quality Management District 2015). However, it is important to note that results from the MATES IV study still represent approximately a 50 percent reduction in air toxics levels and cancer risk compared to MATES III. In addition to the maps in the MATES IV final report (South Coast Air Quality Management District 2015), an interactive map of the MATES IV cancer risks from air toxics calculated using the 2015 OEHHA guidelines is available through this website: http://www.aqmd.gov/home/tools/public.

In 2009, the Advanced Collaborative Emissions Study (ACES) reported that newer diesel engine technologies are very effective in reducing the amount of emissions from diesel trucks, as required by recent regulations (Khalek et al. 2009). In a long-term exposure study published in 2015, rats breathing the lower emissions did not develop cancer, while the rats breathing the higher emissions from older diesel engines (in previous studies) did develop cancer (McDonald et al. 2015). However, the 2015 study did not evaluate whether the PM from the newer engines was any more or less toxic compared to the older engines on a gram per gram basis; the study was not designed to determine such differences. Therefore, without any additional data on the toxicity of PM from the newer diesel engines, the analysis done in the MATES IV study used the same risk factor for both, applied to the mass of PM. For example, whether a person is exposed to 10 ug/m^3 of particulate matter from a single old diesel engine or several new diesel engines, the cancer risk would be the same because it is calculated based on 10 ug/m^3 of exposure.

In the Particulate Matter section of this Appendix, the vast majority of the studies described evaluated the health effects of total PM2.5 exposures by mass, regardless of whether they were from newer diesel engines, older diesel engines, or other sources. While this new diesel technology is very effective in terms of reducing the amount of emissions from diesel trucks, what people are being exposed to is a total concentration of PM from many sources. Health studies generally use this total concentration to analyze whether or not there is an effect on the specific health outcomes evaluated. In addition, it is important to note that direct PM2.5 emissions from diesel engines represent a small portion of overall PM2.5 exposure. NO_x emissions from diesel engines that eventually lead to PM2.5 formation in the atmosphere, however, represent a larger component of PM2.5 exposure (South Coast Air Quality Management District 2013a; Harley 2014).

Volatile Organic Compounds

VOC's are a class of air pollutants that undergo photochemical reactions in the air to form ozone. It should be noted that there are no state or national ambient air quality standards for VOCs because they are not classified as criteria pollutants. VOCs are regulated, however, because limiting VOC emissions reduces the rate of photochemical reactions that contribute to the formation of ozone.

VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM and lower visibility levels. In addition, VOC's that have toxic properties are also regulated as air toxics. Chapter 3 of the draft 2016 AQMP presents data on VOC sources and emissions in the South Coast Air Basin.

Some examples of VOC's that are known to cause health effects include benzene, toluene, ethylbenzene and xylenes (abbreviated BTEX), 1,3-butadiene, formaldehyde, and perchloroethylene. Several of these VOC's are carcinogenic. Based on the MATES IV analysis, benzene, 1,3-butadiene, and carbonyls (formaldehyde and acetaldehyde) together account for approximately 21 percent of the total cancer risk from air toxics in the SCAB. Not all carcinogenic VOC's are known to cause the same types of cancers, although several are associated with blood cancers. For example, the cancers most closely associated with long-term benzene exposure are leukemias. Formaldehyde is linked to nasopharyngeal cancer and leukemias, while 1,3-butadiene causes cancers in both the blood and lymphatic systems (International Agency for Research on Cancer 2012a).

Many VOC's can also cause non-cancer health effects. For these types of health outcomes, OEHHA has developed acute and chronic Reference Exposure Levels (RELs). RELs are concentrations in the air below which adverse health effects are not likely to occur. Acute RELs refer to short-term exposures, generally of one-hour duration. Chronic RELs refer to long-term exposures of several years. OEHHA has also established eight-hour RELs for several substances. The ratio of ambient concentration to the appropriate REL can be used to calculate a Hazard Index. A Hazard Index of less than one would not be expected to result in adverse effects (Dodge et al. 2015).

In the MATES IV assessment of chronic non-cancer health risks, the monitored air toxics levels were found to be below the chronic RELs. In other words, the general levels of air toxics in the SCAB are not expected to cause adverse non-cancer health effects. Importantly, the MATES IV monitoring network was designed to characterize the air toxics exposures in the basin overall. Given that ambient monitoring is necessarily conducted at a limited number of locations, and modeling is limited to a spatial resolution of 2km, there may be higher exposures not captured by the fixed-site monitoring. To address this limitation, particularly in some communities with environmental justice concerns, the MATES IV study also included local-scale studies in 3 communities very close to known industrial sources or large mobile source facilities, with a focus on ultrafine particles and diesel PM emissions. Details of these study results can be found in the MATES IV final report (South Coast Air Quality Management District 2015).

ODORS

Environmental odors are recognized as having the potential to cause health effects and/or quality of life impacts. The theory of "miasma" dates back to Hippocrates in ancient Greek times, and related bad odors to disease. The health effects of environmental odors can vary widely, and depend on the compound causing the odor, the level of the compound, as well as the sensitivity and physiological responses of the person detecting the odor.

Different levels of odor exposure can cause a range of responses and health effects, and the science of odor as a potential health issue was summarized previously by Schiffman and Williams (Schiffman et al. 2005b). There are two key nerves in the nasal cavity involved in odor effects: the olfactory nerve provides the sense of smell, while the trigeminal nerve provides the sense of irritation. At very low levels, an odor can be detected (i.e. odor threshold), and at slightly higher levels, an odor can be recognized and identified. At levels higher than detection or recognition levels, an odor can cause annoyance or intolerance, and at even higher levels, an odor can cause irritation or possible toxicity, if the odor is caused by a compound that is also an air toxic (Schiffman et al. 2005b).

Schiffman and Williams proposed three mechanisms of action for odor symptoms (Schiffman et al. 2005b). In the first mechanism, an odor substance can be at the level that can produce irritation, which triggers the trigeminal nerve. This mechanism is considered a toxic effect because symptoms appear when the chemical concentration is at or above the irritation level; here, the odor serves only as the marker of the toxic effect. In the second mechanism, the odor compound is below the irritation level but above odor detection thresholds, which can result in odor annoyance. This mechanism is relatively common among environmental odors, and has been studied in communities exposed to odors from landfills, hazardous waste sites or concentrated animal feeding operations (CAFO's) (Shusterman et al. 1991; Schiffman et al. 2005a; Heaney et al. 2011; Schinasi et al. 2011; Blanes-Vidal et al. 2012; Hooiveld et al. 2015). In this mechanism, the health effect is not a toxicological effect, and the dose does not necessarily correlate well with the effect in these instances. Genetic factors, previous exposure ("learning"), and beliefs about the safety of the odor may play important roles in these odors causing health symptoms (Shusterman 2001). The third proposed mechanism is when an odor substance is present along with a co-pollutant or endotoxin that is capable of producing health effects. In this mechanism, the effect is also a toxic effect, but the odor serves as a marker of the presence of a mixture that includes a toxic compound; if the co-pollutant were not present, no health effect would be expected in this scenario.

Individual characteristics can play important roles in altering an individual's response to an odor. Factors that can influence odor perception include age, genetics, gender, medical history (including mental health, neurological conditions, and other health conditions), health-related behaviors (tobacco, alcohol), and occupational and environmental factors (Greenberg et al. 2013; Wilson et al. 2014; Agency for Toxic Substances and Disease Registry 2016). Additionally, an individual's cognitive associations with the odor prior to an exposure can result in increased reporting of health-related symptoms after exposure (Shusterman et al. 1991; Shusterman 2001; Greenberg et al. 2013). Common symptoms associated with environmental odor exposures include headache, nasal

congestion, eye, nose and throat irritation, hoarseness or sore throat, cough, chest tightness, shortness of breath, wheezing heart palpitations, nausea, drowsiness, and mental depression (Agency for Toxic Substances and Disease Registry 2016). If the concentrations of the odor compound are below irritation levels, then the symptoms are not expected to persist once the person is no longer exposed; however, being exposed to odor levels at or above irritation levels for longer periods of time may cause symptoms that persist after moving out of the exposure area (Agency for Toxic Substances and Disease Registry 2016).

CONCLUSIONS

A large body of scientific evidence shows that the adverse impacts of air pollution on human and animal health are clear. A considerable number of population-based and laboratory studies have established a link between air pollution and increased morbidity and, in some instances, premature mortality. Importantly, the health effects of air pollution extend beyond respiratory effects, and there is substantial evidence that air pollution (including particulate matter and ozone) exposures cause cardiovascular morbidity and mortality. Some air pollutants, such as diesel PM, lead, and several other air toxics, have been linked to increased cancer risk. Health studies have also identified populations who may be more susceptible to the adverse effects of air pollution, such as children, older adults, low SES communities, people with certain pre-existing health conditions, and people with certain genetic factors. Understanding the impacts of air pollution on these more susceptible populations can help inform policies that better protect public health, for example, in setting standards for criteria air pollutants, and in the development of methods to evaluate air toxics health risks. Continued research on the effects of specific PM constituents and ultrafine particles will be important in furthering the understanding of how these pollutants affect human health.

As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. The new findings have, in turn, led to the revision and lowering of National Ambient Air Quality Standards (NAAQS) which, in the judgment of the Administrator of the U.S. EPA, are necessary to protect public health. Chapter 8 of the draft 2016 AQMP provides an overview of the extensive, multi-year, public process involved in setting federal air quality standards. Assessments of the scientific evidence from health studies is an important part of the process, and has helped inform revisions to the federal air pollution standards. Figures I-15 and I-16 are meant to convey some of the historical context to recent revisions to the NAAQS for ozone and for particulate matter, with regard to key developments in the understanding of the health effects of these pollutants.

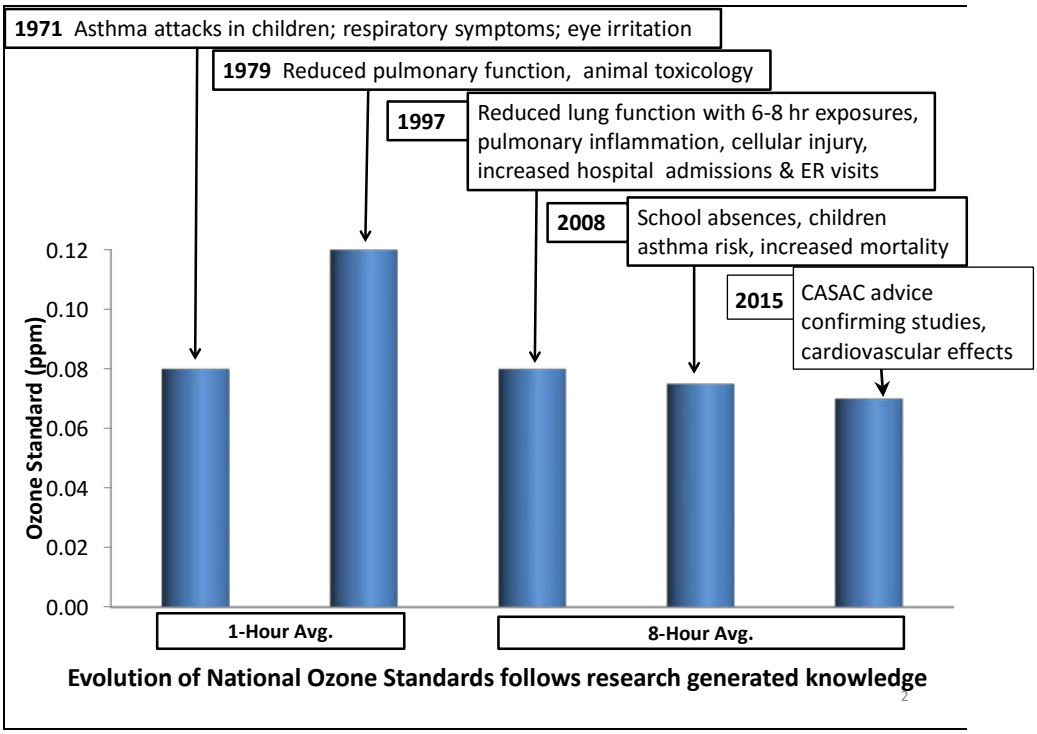


FIGURE I-15

Historical Context to Revisions of NAAQS for Ozone

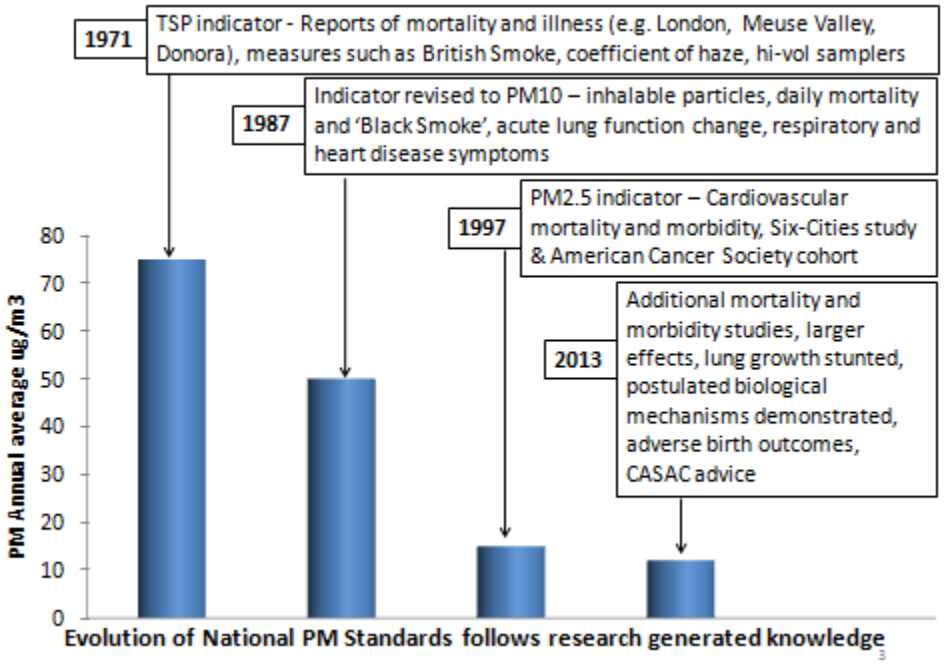


FIGURE I- 16

Historical Context to Revisions of NAAQS for PM

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ATTACHMENT 2

SCAQMD

SIERRA CLUB v. COUNTY OF FRESNO

AMICUS BRIEF

S219783

IN THE SUPREME COURT OF C ALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT
FILED
APR 13 2015
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Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726
Honorable Rosendo A. Pena, Jr.

APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*

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TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE SUPREME COURT:

APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this amicus brief in support of neither party.

HOW THIS BRIEF WILL ASSIST THE COURT

SCAQMD's proposed amicus brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review de novo.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

STATEMENT OF INTEREST OF *AMICUS CURIAE*

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
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BRIEF OF AMICUS CURIAE

SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, "[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 ["*Laurel Heights I*"]) Accordingly, "an agency must use its best efforts to find out and disclose all that it reasonably can." (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)[1].). However, "[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible." (*Association of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project's pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

[1] The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

ARGUMENT

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.

A. Air Quality Regulatory Background

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "chapter 7" hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "Executive Summary" hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called "criteria" document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called "criteria pollutants." EPA must then establish "national ambient air quality standards" at levels "requisite to protect public health",

allowing "an adequate margin of safety." (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), http://www.epa.gov/air/criteria.html (last updated Oct. 21, 2014).)[2]

Under the Clean Air Act, EPA sets emission standards for motor vehicles and "nonroad engines" (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as "stationary sources." The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified "major" stationary sources use technology to achieve the "lowest achievable emission rate," and to control minor stationary sources as

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[2] Particulate matter (PM) is further divided into two categories: fine particulate or $PM_{2.5}$ (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM_{10}) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), http://www.epa.gov/airquality/particlepollution/ (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called "hazardous air pollutants" calling for EPA to establish "maximum achievable control technology" (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as "toxic air contaminants" (TACs) which are subject to two state-required programs. The first program requires "air toxics control measures" for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare "health risk assessments" for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as "significant," the facility must implement a "risk reduction plan" to bring its risk levels below "significant" levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv; then follow "Rule 1401" hyperlink (last visited Apr. 1, 2015).)

B. The SCAQMD's Role Under CEQA

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the "lead agency" that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called "responsible" agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to "trustee agencies" and agencies "with jurisdiction by law" including "authority over resources which may be affected by the project." (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.[3]

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[3] The SCAQMD's CEQA program for its rules is a "Certified Regulatory Program" under which it prepares a "functionally equivalent" document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.[4] SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a "responsible agency" for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii; then follow "Rule 1303" hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with "jurisdiction by law" over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

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[4] The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015; then follow "16. Lead Agency Projects and Environmental Documents Received by SCAQMD" hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, http://www.arb.ca.gov/regact/diesltac/diesltac.htm; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, supra, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT'S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.

Numerous cases hold that courts do not review the correctness of an EIR's conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1, supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

Bd. of Supervisors (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must "draw[] a line that divides *sufficient* discussions from those that are *insufficient*." (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that "[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis." (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." Case law reflects this: "Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible." (*Association of Irritated Residents v. County of Madera, supra,* 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be "feasible"; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a "health risk assessment" before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the "maximally exposed individual" (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588), pp. 11-16*; (last visited Apr. 1, 2015) http://www.aqmd.gov/home/library/documents-support-material; "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, http://www.aqmd.gov/home/forms ; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants[5], such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, http://www.epa.gov/airquality/ozonepollution/ (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, http://www.epa.gov/ttnamti1/archive/cpreldoc.html (last visited Apr. 1, 2015).) NO_x and VOC are known as "precursors" of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population,* Figure 9, http://www.epa.gov/apti/ozonehealth/population.html#levels (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "Appendix V: Modeling & Attainment Demonstrations" hyperlink,

[5] See discussion of types of pollutants, supra, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO_x and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts "internal bank" of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.[6] The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO_x (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).[7] (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6*)* at p. 4.1-35, Table 4.1-29.)

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[6] (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6,* http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011; the follow "26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System" (last visited April 1, 2015).)

[7] The SCAQMD was able to establish the location of future NO_x and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; https://www.epa.gov/ttnamti1/archive/cpreldoc.html; then search "Guideline on Ozone Monitoring Site Selection" click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA "significance" threshold for NO_x and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook; then follow "SCAQMD Air Quality Significance Thresholds" hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a "major" stationary source for "extreme" ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA "significance" finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO_x or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD's thresholds of significance may determine

that many projects have "significant" air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter ($PM_{2.5}$)[8], another "criteria" pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of $PM_{2.5}$. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional $PM_{2.5}$ in the District, up to 2.82 tons/day (5,650 lbs/day of $PM_{2.5}$, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this $PM_{2.5}$ health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties. [9] (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

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[8] SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for "$PM_{2.5}$" or particulate matter less than 2.5 microns in diameter.

[9] Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011), http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011; then follow "Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project" hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small $PM_{2.5}$ increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated $PM_{2.5}$ emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the "normal" "existing conditions" CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.[10]

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[10] Whether a particular study would result in "informational value" is a part of deciding whether it is "feasible." CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.[11] Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.

A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

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technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

[11] In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, "a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts." (*Vineyard Area Citizens v. City of Rancho Cordova, supra,* 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency's action de novo under the "independent judgment" test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby "accord[ing] greater deference to the agency's substantive factual conclusions." (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project's impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR's analysis is sufficient to meet CEQA's informational purposes,[12] while Friant Ranch contends that the substantial evidence standard applies to this question.

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[12] Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,[13] containing two levels of inquiry that should be judged by different standards.[14]

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

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[13] Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

[14] Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document.*" (*Laurel Heights I, supra,* 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra,* 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses "in sufficient detail to enable meaningful participation and criticism by the public. '[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.'" (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, *supra*, 57 Cal.4th 439, 448, 457:

whether "existing conditions" baseline would be misleading or uninformative judged by substantial evidence standard.[15])

If the lead agency's determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA's information disclosure provisions, since it would be infeasible to provide additional information. This Court's decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency's finding that "the precise parameters of future herbicide use could not be predicted." *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4th 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact "substantial". (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

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[15] The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra,* 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra,* 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.[16]

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[16] We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra,* 124 Cal.App.4th 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project. " *Bakersfield, supra,* 124 Cal.App.4th at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra,* 124 Cal.App.4th at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra,* at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR . . . ." (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra,* at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, "Environmental Checklist Form."[17]) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency's noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts' proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA's prohibition on courts interpreting its provisions "in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines." (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra,* at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project's significant impacts on human health. However, except in certain particular circumstances,[18] neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law's requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe "health and safety problems caused by {a project's} physical changes"].) Accordingly, courts must interpret CEQA as a whole to

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[17] Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

[18] E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.[19] Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4th 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck,* 198 Cal.App.4th at p. 959 (citations omitted).[20]

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[19] We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131) , or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

[20] Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta,* (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)[21]

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districts should be considered "state agencies" for purposes of the requirement to consult with "trustee agencies" as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere "local agencies" whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

[21] In *Schenck,* the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck,* 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district's published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district's published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra,* 91 Cal.App.4th 1344, 1369-1371.)

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guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra,* 70 Cal.App.4th 482, 492.

CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is "sufficient as an informational document" is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
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CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015 Respectfully submitted,

Barbara Baird

Barbara Baird

PROOF OF SERVICE

I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

BY MAIL: I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.

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ATTACHMENT 3

SJVAPCD

SIERRA CLUB v. COUNTY OF FRESNO

AMICUS BRIEF

SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

SUPREME COURT
FILED
APR 13 2015
Frank A. McGuire Clerk
Deputy

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.

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APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

> Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality

conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a "serious nonattainment" area to come into attainment of health-based National Ambient Air Quality Standard ("NAAQS") for coarse particulate matter (PM10), an achievement made even more notable given the Valley's extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of "extreme" nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates "smog" and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to "offset" vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)[1], ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

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[1] San Joaquin's incentive program has been so successful that through 2012, it has awarded over $ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. *See* SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) *available at* http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf.

Valley counties and cities that implement the California Environment Quality Act (CEQA).[2] In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.[3] Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.[4] For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.[5]

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

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[2] *See, e.g.*, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), *available at* http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf ("CEQA Guidance").

[3] Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

[4] See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 64-66, 80.

[5] See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).[6] The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

2. How the Proposed Amicus Curiae Brief Will Assist the Court

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

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[6] CEQA does not require speculation. *See, e.g., Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

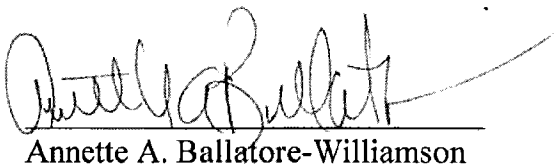
Rule 8.520 Disclosure

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

CONCLUSION

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.

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I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District ("Air District") respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report ("EIR") for the Friant Ranch development project was inadequate under the California Environmental Quality Act ("CEQA") because it did not include an analysis of the correlation between the project's criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as "TACs") regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NOx) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.[1] Once formed, ozone can be transported long distances by wind.[2] Because of the complexity of ozone formation, a specific tonnage amount of NOx or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NOx or VOCs can have high levels of ozone concentration simply due to wind transport.[3] Conversely, the San Francisco Bay Area has six times more NOx and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

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[1] *See* United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: http://www.epa.gov/airquality/ozonepollution/basic.html (visited March 10, 2015).
[2] *Id.*
[3] *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.[4]

Particulate matter ("PM") can be divided into two categories: directly emitted PM and secondary PM.[5] While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.[6] Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SOx) and NOx.[7] Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NOx, SOx and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards ("NAAQS"), which are statutorily required to be set by the United States Environmental Protection

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[4] *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).

[5] United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: http://www.epa.gov/airquality/particlepollution/basic.html (visited March 10, 2015).

[6] *Id.*

[7] *Id.*

Agency ("EPA") at levels that are "requisite to protect the public health," 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.[8]

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.[9] Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District's tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, SOx and VOCs) and the atmospheric chemistry and meteorology of the Valley.[10] At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

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[8] See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: http://www.epa.gov/air/criteria.html#3 (visited March 10, 2015).

[9] *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).

[10] *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM2.5 Plan*, Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf (visited March 19, 2015).

emissions Valley wide.[11] Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.[12]

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.[13] The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.[14] This "offset"

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[11] *Id.*

[12] Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. *See* San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: http://www.valleyair.org/rules/currntrules/Rule2201041l.pdf (visited March 19, 2015).

[13] *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf (visited March 30, 2015).

[14] *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.[15] In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club*, *supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

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[15] [15] *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NOx inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.[16] Running the photochemical grid model used for predicting ozone attainment with the

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[16] *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9,
available at:
http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

> [t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)[17] The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)[18] The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

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[17] Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

[18] Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "'[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.' [Citation.]" *Sierra Club v. City of Orange*,163 Cal.App.4th at 536.[19]

As discussed above, the City's comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since "[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action." *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203.

III. CONCLUSION

For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal's decision requiring an analysis correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

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[19] *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or "piecemealed" the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as *"the use of a single document for both a project-level and a program-level EIR [is] 'confusing',"* and *"[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,"* were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4th at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015

Catherine T. Redmond
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY
UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015

Annette A. Ballatore-Williamson
District Counsel (SBN 192176)

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

PROOF OF SERVICE

I am over the age of 18 years and not a p[arty to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO

On all parties to this action at the following addresses and in the following manner:

PLEASE SEE ATTACHED SERVICE LIST

(XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.

( ) **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.

( ) **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.

Esthela Soto

SERVICE LIST

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

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ATTACHMENT 4

SMAQMD

FRIANT RANCH

INTERIM RECOMMENDATION

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Friant Ranch
Interim Recommendation

Background

The California Supreme Court in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 regarding the proposed Friant Ranch project determined the air quality analysis in the environmental impact report (EIR) was inadequate because it did not make "a reasonable effort to substantively connect the project's air quality impacts to likely health consequences." The Court determined that "the EIR should be revised to relate the expected adverse air quality impacts to likely health consequences or explain in meaningful detail why it is not feasible at the time of drafting to provide such an analysis."

Need

Lead agencies and practitioners preparing documents to comply with the California Environmental Quality Act (CEQA) have requested guidance from the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District) on implementing the Friant Ranch decision in the review and analysis of proposed projects in Sacramento County.

Interim Recommendation

The Sac Metro Air District does not currently have a methodology that would correlate the expected air quality emissions of projects to the likely health consequences of the increased emissions. The Sac Metro Air District is in the process of developing a methodology to assess these impacts, and anticipates releasing it in the fall of 2019. In the interim, agencies should follow the Friant Court's advice to explain in meaningful detail why this analysis is not yet feasible.

This explanation should describe the background underlying air regulations, the regional nature of the regulatory approach, and why the approach is not amenable to project level assessments. This should include a discussion of the public health impact analyses that form the basis for the state and federal health-based pollutant concentration standards, and the application of the standards to regions that were established based upon a commonality of factors impacting air quality. Air districts, in turn, have focused on reducing regional emissions from all sectors to meet the health-based concentration standards, thereby reducing the pollutant specific health impacts for the entire population. For example, the Sac Metro Air District prepared plans to attain and maintain the ozone and particulate matter ambient air quality standards. These attainment plans include emissions inventories, air monitoring data, control measures, modeling, future pollutant-level estimates, and general health information. Attainment planning models rely on regional inputs to determine ozone and particulate matter formation and concentrations in a regional context, not a project specific context. Because of the complexity of ozone formation, the pounds or tons of emissions from a proposed project in a specific geographical location does not equate to a specific concentration of ozone formation in a given area, because in addition to emission levels, ozone formation is affected by atmospheric chemistry, geography, and weather. Secondary formation of particulate matter is very similar to the complexity of ozone formation, and localized impacts of directly emitted particulate matter do not always equate to local particulate matter concentrations due to transport of emissions. The analysis should explain that because air district attainment plans and supporting air model tools are regional in nature, they do not allow for analysis of the health impacts of specific projects on any given geographic location. More information is included in the threshold justification documents developed by the Sac Metro Air District, and available at our website at www.airquality.org.

The analysis should also discuss the current models[i] used in CEQA in air quality analyses, which, in contrast to attainment models, are designed to calculate and disclose the mass emissions expected from the construction and operation of a proposed project (pounds/day and tons/year). The estimated emissions are then compared to significance thresholds, which are in turn keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. The Sac Metro Air District adopted operational emission thresholds for ozone precursors, nitrogen oxides (NOx) and reactive organic gasses (ROG), with the goal of obtaining 0.45 tons/year of NOx and 0.49 tons/year of ROG reductions from new

development projects exceeding the thresholds by including emission reducing design features as mitigation.[ii] More recently, the Sac Metro Air District adopted particulate matter thresholds, PM10 and PM2.5, to align with the new source review permit offset levels, which are designed to prevent new emission sources from affecting attainment progress.[iii] Sac Metro Air District thresholds are set at 65 pounds/day NOx (11.8 tons/year), 65 pounds/day ROG (11.8 tons/year), 80 pounds/day PM10 (14.6 tons/year), and 82 pounds/day PM2.5 (15 tons/year).[iv] CEQA thresholds are a tool Sac Metro Air District uses to obtain emission reductions from development projects to support attainment of the Federal and State ambient air quality standards. This protects public health in the overall region, but there is currently no methodology to determine the impact of emissions on concentration levels in specific geographic areas.

The CEQA analysis should consider the degree to which various other tools, such as CalEEMod, EMFAC, OFFROAD, AERMOD, and HARP and CAMx, could assist in assessing specific health impacts of a project, and, where those tools would not be useful, explain why. For example, while CalEEMod may be useful in comparing emissions to significance thresholds, it is not able to assess transport of pollutants or the impacts of external factors (weather, terrain, etc.) on pollutant concentrations at particular locations.

In Sacramento, concentration modeling of ozone has not been an analytical tool used for project level emissions due to the complex nature of pollution concentration formation and numerous regional influences (multiple emission sources, meteorology, atmospheric chemistry and geography). Although some particulate matter concentration modeling has been conducted for project specific emissions for stationary source permitting purposes, concentration modeling has mainly been used to support ozone attainment demonstration.

Outside of these tools, neither the Sac Metro Air District nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions.

An expanded discussion of health impacts resulting from specific air pollutants may also be warranted for projects with emissions exceeding the Sac Metro Air District's thresholds of significance. There is an array of information on health impacts related to exposure to ozone[v] and particulate matter[vi] emissions published by the US EPA and the California Air Resources Board. Health studies are used by these agencies to set the Federal and State ambient air quality standards. A more general discussion of health impacts related to air pollution is also available on www.sparetheair.com and in the Sac Metro Air District's *Guide to Air Quality Assessment in Sacramento County.*[vii] None of the health-related information can be directly correlated to the pounds/day or tons/year of emissions estimated from a single, proposed project.

Developing Guidance

The interim recommendation is in place to assist lead agencies and practitioners with CEQA document preparation until Sac Metro Air District develops a methodology that provides a consistent, reliable and meaningful analysis to address the Court's direction on correlating health impacts to a project's emissions.

Sac Metro Air District staff have initiated discussions with the other air district's in the Sacramento Federal Ozone Nonattainment area regarding developing guidance in response to Friant Ranch since we share air quality issues and use the same growth assumptions, mobile source emissions, and modeling efforts to support our ozone and particulate matter attainment plans.

One potentially useful tool in developing a methodology is the US EPA's BenMap tool[viii]. According to US EPA's website, BenMap is an "open-source computer program that calculates the number and economic value of air pollution-related deaths and illnesses. The software incorporates a database that includes many of the concentration-response relationships, population files, and health and economic data needed to quantify these impacts." BenMap may be able to provide the detailed health information needed for the guidance under development.

Sac Metro Air District is working with its engineering and environmental technical support consultant, Ramboll USA Corporation, to develop a methodology that will provide a consistent, reliable, efficient, and meaningful analysis that correlates health impacts from proposed projects' emissions for the Sacramento region. The current strategy will analyze how various levels of emissions (the CEQA tonnage estimates) impact attainment pollutant concentration levels, and use BenMap to correlate increases in concentration levels to health impacts. Once a methodology is available, Sac Metro Air District staff will inform interested stakeholders and provide updated guidance in this document and in its *Guide to Air Quality Assessment in Sacramento County*.

Contact Information

Lead agencies and CEQA practitioners may contact Mr. Paul Philley, CEQA and Land Use Section Program Supervisor at 916-874-4882 or pphilley@airquality.org regarding Sac Metro Air District's recommendations.

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[i] CalEEMod, Road Construction Emissions Model, EMFAC, OFFROAD

[ii] Foundation for a Threshold, Justification for Air Quality Thresholds of Significance In the Sacramento Federal Nonattainment Area, August 15, 2001, Adopted March 28, 2002.

[iii] Proposed Particulate Matter CEQA Thresholds of Significance, March 19, 2015, Adopted May 28, 2015.

[iv] Sac Metro Air District, Guide to Air Quality Assessment in Sacramento County, December 2009 (latest update September 2018), Chapter 2, Thresholds of Significance table. http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf

[v] https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population

[vi] https://www.arb.ca.gov/research/health/pm-mort/PMmortalityreportFINALR10-24-08.pdf

[vii] Sac Metro Air District, Guide to Air Quality Assessment in Sacramento County, December 2009 (latest update September 2018), Chapter 1. http://www.airquality.org/LandUseTransportation/Documents/Ch1IntroAq%20FINAL12-2016.pdf

[viii] https://www.epa.gov/benmap

Radford Studio Center Project

Draft EIR

Appendix D-7- Analysis of Health Effects in EIR and City's Air Quality and Health Effects Guidance Document

Analysis of Health Effects Using United States Environmental Protection Agency Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool

The United States Environmental Protection Agency (USEPA) has developed the Co-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA Screening Tool) as a screening tool for state, local, and tribal government staff and others interested in the effects of air pollution to estimate the air quality and health benefits of different emissions scenarios.[1] In 2024, the COBRA Screening Tool recently became available with a user-friendly interface. This tool estimates health effects associated with changes in emissions over large areas such as a County or Air Basin. The USEPA states that those who should use COBRA include but are not limited to "analysts looking to improve their understanding of the air, health, and related economic benefits of clean energy or other policies that reduce emissions" and "environmental agencies interested in reviewing many options to identify policies that maximize health and economic benefits" Based on USEPA data, the COBRA Screening Tool has been used by approximately 150 publications as of April 24, 2024. Use was primarily associated with the evaluation of large-scale programs, policies, or large areas of potential effect such as statewide efforts. The only environmental analysis that used the model was an Environmental Impact Statement for New York State's procurement of offshore wind energy. This list of users demonstrates that the COBRA Screening Tool is designed as a preliminary screening tool for broad analyses, such as policies and programs undertaken by state governments, rather than a CEQA analysis for an individual project.

Nonetheless, a screening level review of Project-related health effects to residents within Los Angeles County was performed using the COBRA Screening Tool. However, neither the City nor the SCAQMD has promulgated use of this or any other model for use in estimating health effects from a development project and this analysis is provided for informational purposes only.

As presented in Section IV.B, Air Quality, of the Draft EIR, criteria pollutant emissions of NOx, VOCs, and $PM_{2.5}$ were calculated using the CalEEMod model. Project annual construction emissions as well as concurrent construction and operational emissions from the Draft EIR were entered into the COBRA screening tool. Only pollutants where Project emissions exceed SCAQMD significance thresholds (i.e., regional emissions for NOx) were analyzed for health effects. Pollutants which remained below SCAQMD regional significance thresholds were assumed to have less than significant health effects and were therefore not analyzed in detail. As part of use of this screening tool, the same

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[1] *https://cobra.epa.gov/[2] USEPA COBRA Future Input Files. https://www.epa.gov/cobra/cobra-future-input-files. Accessed November 15, 2024.*

general assumptions such as on and off-road emission factors and architectural coating emission factors that were used for the air quality analysis in the Project's EIR.

Within the COBRA Screening Tool, the location of the Project must be selected to represent baseline population and ambient pollutant concentrations. The smallest unit of location (geographic scope) within the COBRA Screening Tool would be on a county level. (This is a similar limitation as the models discussed above). For the assessment, Los Angeles County was selected to represent the Project area in terms of population exposure and existing emissions

Using the COBRA Screening Tool, the estimated health effects attributed to Project construction included mortality (0.05 incidences per year) and respiratory-related emergency room visits (0.12 incidences per year). The other health endpoints included asthma-related hospital admissions, all cardiovascular-related hospital admissions (not including myocardial infarctions), and nonfatal acute myocardial infarction, which ranged from 0.001 to 0.013 incidences per year. Health effects attributed to concurrent construction and operation of the Project ranged from 0.001 to 0.008 incidents per year.

Mortality values are based on a 20-year exposure duration, while non-mortality parameters (e.g., heart attack, respiratory, hospital admissions) are based on annual exposure. Therefore, the mortality incidence values presented are conservative, as the duration of construction activities is anticipated to be approximately 39 months.

Also note that for all the health endpoints (mortality, asthma, heart attacks, etc.), the total number of estimated health incidences resulting from Project construction is less than 0.001 percent of the background health incidence within Los Angeles County.[2] The "background health incidence" is the actual incidence of health effects of the local population in the absence of additional emissions from the Project.

In addition, for context, health impact results were compared to the health impact assessment for the California State University Dominguez Hills (CSUDH) 2018 Campus Master Plan EIR for the CSUDH Master Plan that accommodates growth from the current enrollment of approximately 11,000 full-time-equivalent students to the maximum enrollment of 20,000 full-time equivalent students over a planning horizon extending to 2035.[3] Results of the CSUDH health impact assessment indicated that the number of estimated health incidences resulting from project operations would be 0.0058 percent of

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[2] *USEPA COBRA Future Input Files. https://www.epa.gov/cobra/cobra-future-input-files. Accessed November 15, 2024.*

[3] *California State University Dominguez Hills Final EIR. Appendix B.4 Air Quality Impacts analysis. July 2019.*

the background health incidence. When taken into context, this analysis stated that the small increase in incidences and the very small percent of the number of background incidences indicate that these health effects are negligible in a developed, urban environment. The CSUDH Final EIR further underscored the uncertainty of these results due to limitations of the data inputs and the use of simplified conservative assumptions in the regional model and stated that the actual effects may be zero.[4] Also, there is a degree of uncertainty in these results as there are limitations associated with the epidemiological studies used to estimate health effects. As the Project's estimated health incidence is 0.0006 percent, the Project's health incidence would represent approximately 1/10th of the calculated health incidents from the CSUDH project which were determined to be negligible and less than significant. In summary, USEPA's COBRA screening tool was utilized to estimate the health effects associated with the Project's regional NO_x emissions and based on the screening tool the health impacts of the Project would be negligible. The City and SCAQMD have not yet established a methodology for evaluating health impacts from the significant regional emissions associated with a development project. As such, the results provided herein are not meaningful.

[4] *CSUDH Campus Master Plan EIR, September 2019.*

Radford Studio Center Project

Draft EIR

Appendix D-8-AERMOD Dispersion Modeling

Radford Localized Air Quality – Dispersion Modeling

Introduction

The Air Quality analysis of the Draft EIR provided an analysis of localized impacts using the South Coast Air Quality Management District (SCAQMD) Localized Significance Threshold (LST) lookup table methodology. Within the Air Quality analysis, emissions during both construction and operation of the Project were quantified. Although the localized impact analysis was performed consistent with SCAQMD LST methodology, additional dispersion modelling was performed to confirm the conclusions of the air quality analysis.

AERMOD Dispersion Modeling Methodology

Consistent with SCAQMD's LST Guidelines, dispersion modeling was run using USEPA's Regulatory Model AERMOD to assess the downwind extent of criteria pollutant concentrations from proposed construction and operational activities.[1] AERMOD accounts for a variety of refined, site-specific conditions that facilitate an accurate assessment of Project impacts. AERMOD's air dispersion algorithms are based upon a planetary boundary layer turbulence structure and scaling concepts, including the treatment of surface and elevated sources in simple and complex terrain.

Fugitive and exhaust emissions from construction equipment were treated as a set of side-by-side elevated volume sources. The release height was assumed to be 12 feet for exhaust sources and one meter for fugitive sources. This represents the mid-range of the expected plume rise from frequently used construction equipment and operational heavy-duty trucks during daytime atmospheric conditions. All construction exhaust emissions were assumed to take place over a 39-month duration on weekdays between 7 a.m. to 3 p.m. (8-hour period). Operational exhaust emissions were assumed to take place 5-days per week between 7 a.m. to 3 p.m. (8-hour period). Operational sources were treated as elevated volume sources and point sources for emergency generator stacks.

Air dispersion models require additional input parameters including local meteorology and receptors. Due to the sensitivity to individual meteorological parameters such as wind speed and direction, the USEPA recommends that meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. In response to this recommendation, meteorological data

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[1] *SCAQMD, Final-Localized Significance Threshold Methodology, 2008.*

from the SCAQMD East San Fernando Valley monitoring station (Source Receptor Area 7) were used to represent local weather conditions and prevailing winds.

Cartesian receptor grids were used to represent nearby sensitive land uses. The Cartesian receptor grids were placed at each sensitive use with a built in 25 meter spacing for the nearby residential uses. All receptors were placed at ground level, which is recommended by SCAQMD for AERMOD modeling. Elevations for both sources and receptors were provided by the U.S. Geological Survey (USGS) and included using the AERMOD terrain processor AERMAP.

Criteria pollutant concentrations were obtained from the Air Quality analysis of the Draft EIR. Please refer to Table 1 for emission rate calculations for input into the AERMOD model.

AERMOD Dispersion Modeling Results

Criteria pollutant concentrations resulting from Project construction and operational would also remain well below California and Federal Ambient Air Quality Standards (AAQS). These ambient air quality standards provide public health protection, including protecting the health of “sensitive” populations, such as asthmatics, children, and the elderly.

Results of dispersion modeling indicate an exceedance of AAQS for Nitrogen Dioxide (NO2) and PM10 during construction without mitigation. However, with application of mitigation measures indicated within he Air Quality analysis of the Draft EIR, pollutant concentrations would be reduced below AAQS. As shown in Table 2, criteria pollutant concentrations for sensitive uses would remain below health protective thresholds. Therefore, results of the dispersion modeling confirm results of the Air Quality analysis of the Draft EIR.

Radford - AERMOD Dispersion Modeling

AERMOD Input Parameters - Construction

Unmitigated - (lbs/day)[1]									
	NOx	CO	PM10	PM2.5	PM10 Dust	PM2.5 Dust	PM10 (Annual)	PM10 Dust (Annual)	
Const_S	95	117	3	3	62	6	2	31	Construction South represents the southern portion of the Project site
Const_N	62	85	1	1.07	2	1.76			Construction North represents the northern portion of the Project site, including North Lot Parking
Offsite	12	19	1	0					Offsite represents off-site improvements

Unmitigated - (g/s)									
Const_S	1.496	1.843	0.047	0.047	0.98	0.09	0.027	0.48	
Const_N	0.976	1.339	0.016	0.017	0.03	0.03			
Offsite	0.195	0.299	0.010	0.007					
Haul1	0.237	0.315	0.010	0.007					Includes offsite improvement emissions
Haul2	0.237	0.315	0.010	0.007					Includes offsite improvement emissions

Mitigated - (lbs/day)[1]									
	NOx	CO	PM10	PM2.5	PM10 Dust	PM2.5 Dust	PM10 (Annual)	PM10 Dust (Annual)	
Const_S	37	136	1	0.72	16	2	0.4	9	
Const_N	18	101	0.57	0.55	0.91	0.13			
Offsite	12	19	1	0					

Mitigated - (g/s)								
Const_S	0.583	2.142	0.016	0.011	0.25	0.03	0.006	0.14
Const_N	0.283	1.591	0.009	0.009	0.014	0.0020		
Offsite	0.195	0.299	0.010	0.007				
Haul1	0.195	0.299	0.010	0.007				
Haul2	0.195	0.299	0.010	0.007				

[1] Please refer to Appendix D, CalEEMod Outputs

Radford - AERMOD Dispersion Modeling

Haul Truck Emission Rate Calculations

Trip Parameters[1]

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix	Daily VMT
Grading	Hauling	846	29	HHDT	24,534

Emission Factor Back calculation - Haul Truck

	NOx	CO	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily Hauling (lbs/day)	95.05	35.47	1.08	22.74	23.82	1.08	6.23	7.31
Hauling VMT	24,534	24,534			24,534			24,534
Emission Rate (g/mi)[2]	1.76	0.66			0.44			0.14

Emissions Rate Calculations - Haul Truck

Distance Travelled (mi)[3]	0.81	0.81			0.81			0.81
Daily Trips	846	846			846			846
Emission Rate (g/s)	0.04	0.02			0.01			0.00

[1] Please refer to Appendix D, CalEEMod Outputs

[2] Emission rate based on back calculation of emissions calculated within CalEEMod

[3] Distance travelled measured within AERMOD

Table 1 - AERMOD Input Parameters (Operations)

Radford - AERMOD Dispersion Modeling

AERMOD Input Parameters - Operations

	lbs/day			
Project Regional Emissions (Buildout Year)[1]	NOx	CO	PM10	PM2.5
Area	0.42	64.80	0.05	0.03
Energy	3.31	2.78	0.25	0.25
Emergency Generator	10.25	3.98	0.73	0.73
Charbroiler	0.00	0.00	6.64	3.79
Onsite Trucks	2.15	14.08	2.55	0.68
Total	48.73	410.64	88.72	25.78
Area and Onsite Trucks (lbs/day)	2.57	78.88	2.60	0.71
Area and Onsite Trucks (g/s)	0.04045	1.242167	0.040996	0.01115

[1] Please refer to Appendix D, CalEEMod Outputs[1]

Emission rates are based on an 8-hour workday

Radford - AERMOD Dispersion Modeling

AERMOD Input Parameters - Operations Emergency Generators

lbs/day

Future Project								AERMOD Inputs		
					NOx	CO	PM	NOx	CO	PM
Source Name	Fuel Type	Annual Fuel Usage (gal.)	Duration per Test (min)	Gallons per Hour	Emissions (lbs/day)			Emissions (g/s)[1]		
North Lot	Diesel	22	15	12	1.4	0.3	0.1	0.177	0.039	0.002
Admin#2	Diesel	1	15	15	1.8	0.4	0.1	0.222	0.048	0.002
Sater Structure	Diesel	9	15	12	1.4	0.3	0.1	0.177	0.039	0.002
Broadcast Center #1	Diesel	970	15	87	10.2	2.2	0.7	0.475	0.281	0.012
Broadcast Center #2	Diesel	970	15	87	10.2	2.2	0.7	0.475	0.281	0.012
Norvet	Diesel	24	15	11	1.3	0.3	0.1	0.158	0.034	0.001
Emergency	Diesel	14	15	2	0.2	0.1	0.0	0.029	0.006	0.0003
New Generator 17	Diesel	1108	15	142	0.8	4.0	0.0	0.096	0.502	0.0005
New Generator 27	Diesel	1108	15	142	0.8	4.0	0.0	0.096	0.502	0.0005
New Generator 37	Diesel	1108	15	142	0.8	4.0	0.0	0.096	0.502	0.0005
New Generator 47	Diesel	1108	15	142	0.8	4.0	0.0	0.096	0.502	0.0005
North Structure	Propane	0	90	8						

Broadcast Center 1 and 2 Generator Emissions Calculations	
Rating (kw)	1250
Load Factor	0.73
Duration (hr)	0.25
kw-hr	228.125
NOx (g/kw-hr)[2]	7.5
Emissions (g/hr)	1710.938
Emissions (g/s)	0.47526

[1] Please refer to Appendix D, Emergency Generator Calculations. Emissions are based on an 8-hour workday

[2] California Air Resources Board Executive Order U-R-002-0260. Model Year 2005 Cummins 5CEXL050 Engine Emissions Certification

Radford - AERMOD Dispersion Modeling

AERMOD Input Parameters - Operations Char Broilers

Emission Rates[1]	PM10 (lbs/day)	PM2.5 (lbs/day)
Charbroilers	4.15	2.37
Restaurant (Commissary)	2.49	1.42
Total	6.64	3.79
Emission Rate (g/s)[2]	0.105	0.060

[1] Please refer to Appendix D, Char Broiler emissions calculations

Radford - AERMOD Dispersion Modeling

Results Summary

NO2 ppm to ug/m3 conversion	1883
CO ppm to ug/m3 conversion	1150

Construction - 39-month Scenario (Unmitigated)

Parameter	NO2 - Annual	NO2 - 1hr	NO2 - 1hr 98th percentile	PM10 - 24hr	PM10 - Annual	PM2.5 - 24hr	CO - 1hr	CO - 8hr
Concentration (ug/m3)	13.9	226.2	226.2	8.9	2.7	1.7	261.5	110.0
Ambient (ppm)	0.014	0.065	0.049				2.6	1.9
Ambient (ug/m3)	26	123	93				2,990	2,185
Total (ug/m3)	40	349	319	9	3	2	3,251	2,295
Threshold (ug/m3)	57	339	188	10.4	1	10.4	23,000	10,000
Over/(Under)	(17)	10	131	(2)	1.72	(9)	(19,749)	(7,705)
Exceed Threshold?	No	Yes	Yes	No	Yes	No	No	No

Construction - 39-month Scenario (Mitigated)

Parameter	NO2 - Annual	NO2 - 1hr	NO2 - 1hr 98th percentile	PM10 - 24hr	PM10 - Annual	PM2.5 - 24hr	CO - 1hr	CO - 8hr
Concentration (ug/m3)	6.0	87.3	87.3	2.5	0.6	0.6	261.5	110.0
Ambient (ppm)	0.014	0.065	0.049				2.6	1.9
Ambient (ug/m3)	26	123	93				2,990	2,185
Total (ug/m3)	32	210	180	2	1	1	3,251	2,295
Threshold (ug/m3)	57	339	188	10.4	1	10.4	23,000	10,000
Over/(Under)	(25)	(129)	(8)	(8)	(0.43)	(10)	(19,749)	(7,705)
Exceed Threshold?	No	No	No	No	No	No	No	No

Operations

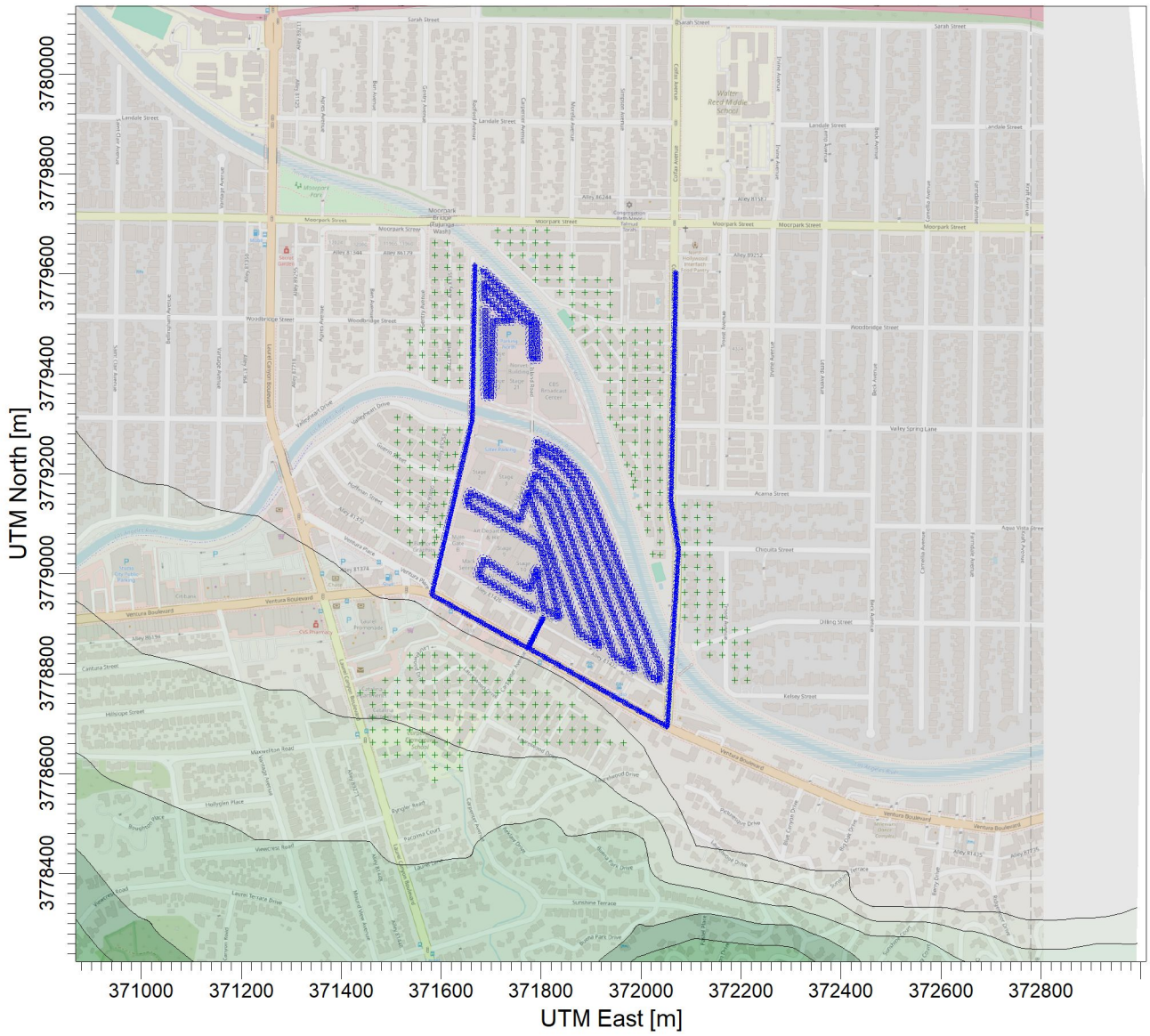
Parameter	NO2 - Annual	NO2 - 1hr	NO2 - 1hr 98th percentile	PM10 - 24hr	PM10 - Annual	PM2.5 - 24hr	CO - 1hr	CO - 8hr
Concentration (ug/m3)	5.5	106.4	68.6	1.4	0.6	0.1	185.9	47.2
Ambient (ppm)	0.014	0.065	0.049				2.6	1.9
Ambient (ug/m3)	26	123	93				2,990	2,185
Total (ug/m3)	32	230	162	1	1	0.1	3,176	2,232
Threshold (ug/m3)	57	339	188	10.4	1	10.4	23,000	10,000
Over/(Under)	(25)	(109)	(26)	(9)	(0.37)	(10)	(19,824)	(7,768)
Exceed Threshold?	No	No	No	No	No	No	No	No

SCAQMD Ambient Monitoring Data (ppb) - SRA 7

Year	NO2 - Annual	NO2 - 1hr	NO2 - 1hr 98th percentile	CO - 1hr	CO - 8hr
2023	11.8	51.4	46.1	2.3	1.7
2022	12.9	54.2	47.2	2.2	1.8
2021	13.9	65.4	49.4	2.6	1.9
Max	13.9	65.4	49.4	2.6	1.9

PROJECT TITLE:

Radford - Construction
Source Receptor Diagram



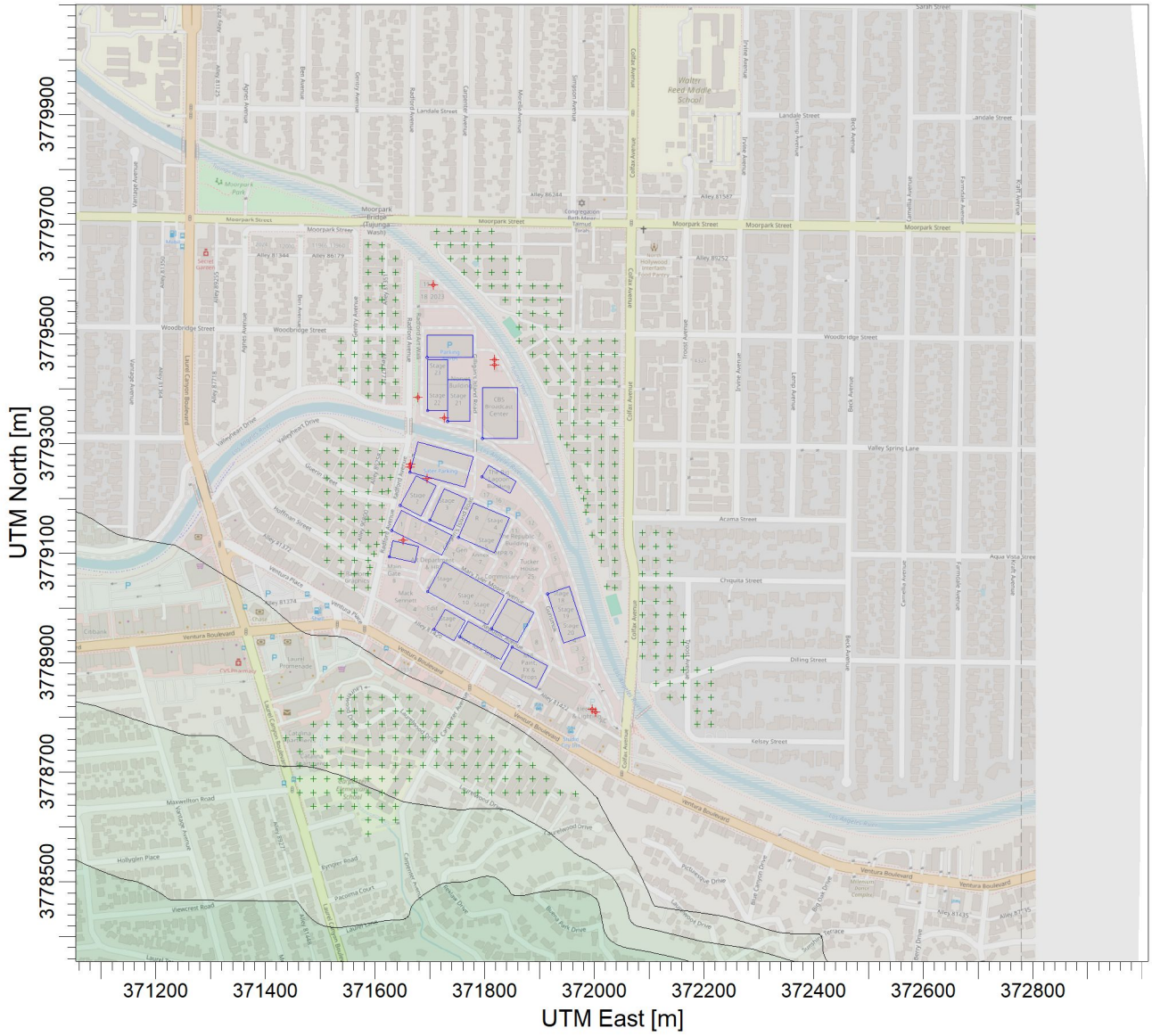
Terrain Contours meters

182 190 200 210 220 230 240 250 260 270 280 290 300 304

COMMENTS:	SOURCES: **4**	COMPANY NAME:	
	RECEPTORS: **394**	MODELER:	
		SCALE: 1:13,474 0 0.5 km	
		DATE: **12/31/2024**	PROJECT NO.:

PROJECT TITLE:

Radford - Operations
Source Receptor Diagram



Terrain Contours meters

182 190 200 210 220 230 240 250 260 270 280 290 300 304

COMMENTS:	SOURCES: **13**	COMPANY NAME:	
	RECEPTORS: **394**	MODELER:	
		SCALE: 1:12,310 0 0.4 km	
		DATE: **12/31/2024**	PROJECT NO.:

Radford Studio Center Project
Draft EIR
Appendix D-9-GHG Emission Summary and Parameters

- LADOT VMT Calculator Data
- Electric Vehicle (EV) and Solar Modeling Parameters
- Dewatering Electricity Calculations
- Miscellaneous Sources
- EMFAC Output
- SB 100 – Renewable Portfolio Standards

Radford Studio Center

GHG Emissions Summary

Construction Emissions Summary (GHG)

CalEEMod Output Summary	
2025	1,295
2026	14,032
2027	6,259
2028	5,026
Dewatering (Year 2025)	7
Total	26,619
Amortized	887

Operational Emissions Summary (GHG)

CalEEMod Output Summary	Project	Land Use Exchange	Project w/Natural Gas
Baseline (2023 - Baseline Year)[a]	**$MTCO_2e$**	**$MTCO_2e$**	**$MTCO_2e$**
Area	20	20	20
Energy (Natural Gas)	5,706	5,706	5,706
Mobile	7,353	7,353	7,353
Electric Vehicle Charging Credit	(29)	(29)	(29)
Solar	(155)	(155)	(155)
Emergency Generators	33	33	33
Solid Waste	594	594	594
Water/Wastewater	409	409	409
Refrig.	18	18	18
Miscellaneous Uses (Signage, Basecamp, EV Chargers)	460	460	460
Onsite Vehicles	386	386	386
Total	**14,794**	**14,794**	**14,794**
Baseline (2028 - Buildout Year)[a]			
Area	20	20	20
Energy (Natural Gas)	4,703	4,703	4,703
Mobile	6,561	6,561	6,561
Electric Vehicle Charging Credit	(28)	(28)	(28)
Solar	(122)	(122)	(122)
Emergency Generators	33	33	33
Solid Waste	525	525	525
Water/Wastewater	409	409	409
Refrig.	18	18	18
Miscellaneous Uses (Signage, Basecamp, EV Chargers)	362	362	362
Onsite Vehicles	386	386	386
Total	**12,867**	**12,867**	**12,867**
Buildout (2028 - Buildout Year)[b]			
Area	74	74	74
Energy (Natural Gas and Electricity)[b]	9,646	9,721	9,431
Mobile	13,733	13,891	13,733
Electric Vehicle Charging Credit	(1,241)	(1,241)	(1,241)
Solar	(367)	(367)	(367)
Emergency Generators	66	66	66
Solid Waste	1,008	1,008	1,008
Water/Wastewater	804	804	804
Refrig.	29	29	29
Miscellaneous Uses (Signage, Basecamp, EV Chargers)	461	530	530
Mobility Hub(s) and Onsite Vehicles	1,016	1,016	1,016
Construction	887	887	887
Total	**26,116**	**26,418**	**25,970**
Project (Buildout less Baseline)			
Area	54	54	54
Energy (Natural Gas and Electricity)	4,943	5,018	4,728
Mobile	7,172	7,330	7,172
Electric Vehicle Charging Credit	(1,213)	(1,213)	(1,213)
Solar	(245)	(245)	(245)
Emergency Generators	33	33	33
Solid Waste	483	483	483
Water/Wastewater	395	395	395
Refrig.	11	11	11
Miscellaneous Uses (Signage, Basecamp, EV Chargers)	99	168	168
Mobility Hub(s) and Onsite Vehicles	630	630	630
Construction	887	887	887
Total	**13,249**	**13,551**	**13,103**

[a] Existing Uses

[b] Please refer to Appendix D-2 of this Draft EIR

Radford Studio Center

5/15/2024

LADOT VMT Calculator Data

VMT Summary	Existing	Proposed Project	With Mitigation	Project Weekday Trips	Weekend Trips	Weekend Vs. Weekday Ratio
Daily Trips	7,783	16,435	16,435	1	1	**1.00**
Daily VMT	52,567	109,996	109,996			

Project without TDM (MXD Data)

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT	Reduction vs. Unadjusted MXD (%)
Home Based Work Production	0	0.0%	0	10.1	0	0	
Home Based Other Production	0	0.0%	0	6.7	0	0	
Non-Home Based Other Production	2,501	-2.2%	2447	7.7	19,258	18,842	
Home-Based Work Attraction	8,975	-11.0%	7985	7.3	65,518	58,291	
Home-Based Other Attraction	5,139	-15.4%	4348	5.4	27,751	23,479	
Non-Home Based Other Attraction	2,501	-2.1%	2448	6.0	15,006	14,688	**10%**
Total	**19,116**				**127,533**	**115,300**	

Project with TDM (MXD Data)

		Proposed Project		*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-4.6%	0	0	-4.6%	0	0
Home Based Other Production	-4.6%	0	0	-4.6%	0	0
Non-Home Based Other Production	-4.6%	2,334	17,975	-4.6%	2,334	17,975
Home-Based Work Attraction	-4.6%	7,618	55,610	-4.6%	7,618	55,610
Home-Based Other Attraction	-4.6%	4,148	22,399	-4.6%	4,148	22,399
Non-Home Based Other Attraction	-4.6%	2,335	14,012	-4.6%	2,335	14,012
Total		**16,435**	**109,996**		**16,435**	**109,996**

14%

Source: Gibson Transportation Consulting Inc., Transportation Assessment for the Radford Studio Center Project, Studio City, California, March 2024.

GHG Emissions Reductions for Commercial Uses Associated with City Codes (Electric Vehicle Charging Stations/Plugins)

Step 1: Estimating GHG Emisisons Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle

	Existing (Year 2023)	Existing (Year 2028)	Buildout (Year 2028)	
LADWP Electricity Emission Factor[1]	0.23	0.18	0.18	MTCO2E/MWh
Total VMT per Year[2]	13,141,750	13,141,750	27,499,000	
Percent of Parking Spaces with EV Charger[2]	0.94%	0.94%	20%	
Annual VMT Reduction (Based on EV Chargers)	123,532	123,532	5,499,800	
Average EV Efficiency[2]	195	195	195	Wh/km
Annual EV Charging at Project Site	38,767	38,767	2,588,938	kWh/year
Fuel Economy of Electric Vehicle[3]	0.37	0.40	0.40	kWh/mile
Gasoline/Diesel CO2 Emissions While Running[3]	322	297	297	grams/mile

Step 2: Estimating GHG Emissions Reduction from Installing Electric Vehicle Charging Stations/Plugins

GHG Emissions of Gasoline/Diesel Vehicle[4]	40	37	1,635	MTCO2E/MWh
GHG Emissions of Electric Vehicle	10	9	394	MTCO2E/MWh
GHG Emisisons Reduction	**29**	**28**	**1,241**	MTCO2E/MWh

Notes:
1) CO2 intensity factor reflects a 2028 RPS for LADWP (397 lbs of CO2E/MWh).
2) Please see Transportation VMT Calculator Outputs. City Code requires 10% of parking spaces to be equipped with EV chargers.
3) CARB, EMFAC 2021, Electric and Plug-in vehicles for 2023 and 2028. Year 2021 average fuel economy shows higher efficiency than future years. However, this is due to the lack of electric powered heavy duty trucks in Year 2021, which would lower the average fuel economy.
4) CARB, 2021. EMFAC2021, running exhaust emission rate for CO2 and CH4 for light duty gasoline- and diesel-powered vehicles in Los Angeles, aggregated for all models and speeds, averaged over all seasons for 2028.

GHG Emissions Reductions for Solar Panels

Existing (Year 2023):

Existing Solar Array[a]	676	Annual Mwh production in Year 2022 (500 kw array)				
Existing CO2 Intensity (lb/MWh)[b]	504	CO_2	0.029	CH_4	0.006	N_2O
Global Warming Potential	1	CO_2	25	CH_4	298	N_2O
CO2e	(155)	mtons/yr				

Existing (Year 2028):

Existing Solar Array[a]	676	Annual Mwh production in Year 2022 (500 kw array)				
CO2 Intensity in 2028 (lb/MWh)[b]	397	CO_2	0.029	CH_4	0.006	N_2O
Global Warming Potential	1	CO_2	25	CH_4	298	N_2O
CO2e	(122)	mtons/yr				

Buildout Solar Array[a]	2,028	Scaled up based on estimated 1.5 MW array				
CO2 Intensity in 2028 (lb/MWh)[b]	397	CO_2	0.029	CH_4	0.006	N_2O
Global Warming Potential	1	CO_2	25	CH_4	298	N_2O
CO2e	(367)	mtons/yr				

[a] Radford Studio Center. Mechanical and Electrical Services Department
[b] LADWP Power Content Label (2022) and SB 100 targets

Radford Studio Center
Dewatering Electricity Calculations

Dewatering Volumes[a]

Area	Total Gallons
1	20,300,000
2 and 3	15,400,000
Total	**35,700,000**

Dewatering Parameters

Treatment System Parameters

Flow Rate (gal/day)[a]	79,000	24 hrs/day operation
Flow Rate (L/day)	299,047	
Number of Pumps[b]	10	
Horsepower Rating	0.5	
Load Factor[c]	0.74	
Months	15	
Hours per Day	24	
Total Hours[d]	10,800	
Total Horsepower Hour	39,960	
Conversion from horsepower to kW (kW/hp)[e]	0.745701	
Total Energy Usage (kWh)	29,798	

CO2 Intensity (lb/MWh)	504	CO_2	0.029	CH_4	0	N_2O
Global Warming Potential	1	CO_2	25	CH_4	298	N_2O
CO2e	7	mtons/yr				

[a] Dewatering Simulation and Analysis for Excavation and Underground Parking Structure construction. 4024,4064, and 4200 N. Radfod Avenue. Studio City, California

[b] Based on 8 dewatering pumps + 2 GAC pumps

[c] CalEEMod default load factor for pumps

[d] 30 days per month

[e] CalEEMod Users Guide, Appendix C

Calculation of Basecamp and Mobility Hub(s) Lighting and Ventilation Electricity Usage

Basecamp Lighting (Uncovered)	0.15	watts/sf	Open Parking (CalEEMod Default)
Basecamp Lighting (Covered/Enclosed/Below Grade)	0.55	watts/sf	Maintenance-Detailed Task Work
Mobility Hub Lighting (Covered)	0.45	watts/sf	Transportation-Ticketing
Mobility Hub Lighting for Bathrooms	0.65	watts/sf	Restroom
Basecamp Ventilation for Enclosed/Below Grade	0.41	kWh/sf Annual	Same as Parking Structure (Enclosed/Below Grade)

			Electricity (kWh/yr)		
Basecamp and Mobility Hub(s) Lighting and Ventilation Electricty Usage	**Existing (sf)[a]**	**Proposed (sf)[a]**	**Existing**	**Proposed**	
Circulation Areas	1,045,000	840,000	457,710	367,920	Lighting would be limited (miscellaneous), but conservatively includes 8 hrs at 0.15 watts/sf
Uncovered Basecamp/Production Area	376,000	223,000	603,856	97,674	Lighting would be limited (miscellaneous), but conservatively includes 8 hrs at 0.15 watts/sf
Covered Basecamp	-	44,000	-	179,872	Lighting includes 16 hrs at 0.55 watts/sf and 8 hrs at 0.3 watt/sf
Enclosed/Below Grade Basecamp	-	64,000	-	287,953	Lighting includes 16 hrs at 0.55 watts/sf and 8 hrs at 0.3 watt/sf and ventilation at 0.41 kWh/sf annual
Mobility Hub(s) (Covered)	-	54,200	-	187,289	Lighting includes 16 hrs at 0.45 watts/sf and 8 hrs at 0.3 watt/sf
Mobility Hub(s) (Covered) Bathroom	-	1,000	-	2,847	Lighting includes restroom at 0.65 watt/sf for 12 hrs (motion detection switches)
Total:			**1,061,566**	**1,123,555**	**kWh/yr**

[a] Please refer to Figures II-4, II-5, II-11, and II-12

Source: 2022 Building Energy Efficiency Standards (Table 140.6-C (Area Category Method-Lighting Power Density Values))

Calculation of Basecamp and Mobility Hub Electrical Connections and EV Chargers Electricity Usage

	Existing	**Proposed**	
Basecamp Electrical Connections	938,746	1,370,032	kWh/yr
Mobility Hub(s) EV (4) Chargers for Shuttles		54,750	kWh/yr

Calculation of Signage Electricity Usage

	Buildout	
	Interior[a]	Exterior[a]
Sign Square footage (sf)	**75,600**	**49,800**
Display Type Breakdown (%)		
Unlighted Static Display (%)	**0%**	**0%**
Lighted Static Display (%) dusk to dawn	**73%**	**100%**
Digital Display (%)	**27%**	**0%**
Digital Display (hours per day)	**12**	**12**
Display Type Breakdown (sf)		
Unlighted Static Display (sf)	0	0
Lighted Static Display (sf)	55,339	49,800
Digital Display (sf)	20,261	0
Electricity Usage Factors by Display Type (kwh/year*sf)		
Unlit Static Display (kwh/year*sf)	0	0
Lighted Static Display (kwh/year*sf)[b, c]	2.7	2.7
Digital Display (kwh/year*sf)[d]	50.6	50.6
Electricity Usage Factors by Display Type (kwh/year)		
Unlit Static Display (kwh/year)	0	0
Lighted Static Display (kwh/year)	150,925	135,818
Digital Display (kwh/year)	512,550	0
Total Signage (kwh/year)	**663,475**	**135,818**

[a] Please refer to Section IV.J. Land Use and Planning of this Draft EIR
[b] Based on average usage of 1,000,000 kWh/year for 110,000 square feet of signage using metal halide lighting (Metro TCN EIR)
[c] Assumes use of LEDs would result in 70% reduction in energy usage vs Metal Halide: https://lumefficient.com/quick-metal-halide-to-led-conversion-guide/
[d] Based on a 14' x 48' digital display. Electricity usage ranges from 24,000 to 34,000 kWh/year. Assumes 24 hr/day operation. (Metro TCN EIR)

Existing Baseline Electricity Usage from the Above Sources (kwh/year):	2,000,312	kwh/yr				
CO2 Intensity in 2023 (lb/MWh)	504	CO_2	0.029	CH_4	0.006	N_2O
Global Warming Potential	1	CO_2	25	CH_4	298	N_2O
CO2e	**460**	mtons/yr				
Existing Buildout Electricity Usage from the Above Sources (kwh/year):	2,000,312	kwh/yr				
Project Buildout Electricity Usage from the Above Sources (kwh/year):	2,548,337	kwh/yr				
Max Land Use Exchange Electricity Usage from the Above Sources (kwh/year):	2,928,901	kwh/yr				
CO2 Intensity in 2028 (lb/MWh)	397	CO_2	0.029	CH_4	0.006	N_2O
Global Warming Potential	1	CO_2	25	CH_4	298	N_2O
Existing Buildout GHG Emissions	**362**	mtons/yr				
Project Buildout GHG Emissions	**461**	mtons/yr				
Max Land Use Exchange GHG Emissions	**530**	mtons/yr				

EMFAC2021 Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Energy Consumption (kWh/day)
Los Angeles	2023	Annual	HHDT	Electricity	Aggregated	Aggregated	41	2,660	654	4,722.17
Los Angeles	2023	Annual	LDA	Electricity	Aggregated	Aggregated	151,623	7,061,879	760,271	2,726,468.27
Los Angeles	2023	Annual	LDT1	Electricity	Aggregated	Aggregated	743	27,278	3,427	10,531.62
Los Angeles	2023	Annual	LDT2	Electricity	Aggregated	Aggregated	7,409	275,541	38,050	106,381.65
Los Angeles	2023	Annual	LHDT1	Electricity	Aggregated	Aggregated				
Los Angeles	2023	Annual	LHDT2	Electricity	Aggregated	Aggregated				
Los Angeles	2023	Annual	MDV	Electricity	Aggregated	Aggregated	7,971	296,657	40,945	114,533.95
Los Angeles	2023	Annual	MHDT	Electricity	Aggregated	Aggregated	28	606	362	633.61
Los Angeles	2023	Annual	OBUS	Electricity	Aggregated	Aggregated				
Los Angeles	2023	Annual	SBUS	Electricity	Aggregated	Aggregated	2	22	27	25.34
Los Angeles	2023	Annual	UBUS	Electricity	Aggregated	Aggregated	86	4,841	343	10,227.34
Los Angeles	2023	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	86,566	2,023,471	357,950	611,148.45
Los Angeles	2023	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	309	8,664	1,279	2,616.80
Los Angeles	2023	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	11,316	296,689	46,790	89,608.97
Los Angeles	2023	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	6,330	145,714	26,173	44,009.97

					Miles/kWh	kWh/mile
Totals	10,144,022.08		3,720,908.15	**2.7**	0.37
Total (Electricity)	7,669,484.22	0.76	2,973,523.96	**2.6**	0.39
Total (Plug-in Hybrid)	2,474,537.86	0.24	747,384.19	**3.3**	0.30

EMFAC2021 Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	Energy Consumption (kWh/day)
Los Angeles	2028	Annual	HHDT	Electricity	Aggregated	Aggregated	1,528	168,704	20,878	300,882.33
Los Angeles	2028	Annual	LDA	Electricity	Aggregated	Aggregated	246,221	11,419,406	1,210,834	4,408,833.04
Los Angeles	2028	Annual	LDT1	Electricity	Aggregated	Aggregated	1,872	86,780	9,159	33,504.22
Los Angeles	2028	Annual	LDT2	Electricity	Aggregated	Aggregated	25,086	861,396	126,117	332,569.77
Los Angeles	2028	Annual	LHDT1	Electricity	Aggregated	Aggregated	7,169	450,826	100,216	252,279.96
Los Angeles	2028	Annual	LHDT2	Electricity	Aggregated	Aggregated	1,867	111,714	24,762	62,549.48
Los Angeles	2028	Annual	MDV	Electricity	Aggregated	Aggregated	26,159	894,991	131,365	345,540.56
Los Angeles	2028	Annual	MHDT	Electricity	Aggregated	Aggregated	2,813	153,538	37,663	160,764.31
Los Angeles	2028	Annual	OBUS	Electricity	Aggregated	Aggregated	81	5,758	1,613	6,059.63
Los Angeles	2028	Annual	SBUS	Electricity	Aggregated	Aggregated	123	3,878	1,375	4,484.18
Los Angeles	2028	Annual	UBUS	Electricity	Aggregated	Aggregated	477	50,321	1,907	105,840.27
Los Angeles	2028	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	114,381	2,732,014	472,964	825,149.74
Los Angeles	2028	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	1,428	40,230	5,904	12,150.58
Los Angeles	2028	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	24,232	630,844	100,200	190,533.69
Los Angeles	2028	Annual	MDV	Plug-in Hybrid	Aggregated	Aggregated	14,853	360,055	61,417	108,747.41

					Miles/kWh	kWh/mile
Totals	17,970,454.41		7,149,889.18	**2.5**	0.40
Total (Electricity)	14,207,311.14	0.79	6,013,307.75	**2.4**	0.42
Total (Plug-in Hybrid)	3,763,143.27	0.21	1,136,581.43	**3.3**	0.30

EMFAC2021 Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	CO2 (tons/day)	CH4 (tons/day)	N2O (tons/day)
Los Angeles	2023	Annual	LDA	Diesel	Aggregated	Aggregated	9,775	293,631	40,275	82.71	0.00	0.01
Los Angeles	2023	Annual	LDA	Gasoline	Aggregated	Aggregated	3,441,157	137,073,184	16,009,115	44,689.61	0.48	0.77
Los Angeles	2023	Annual	LDT1	Diesel	Aggregated	Aggregated	135	2,742	393	1.33	0.00	0.00
Los Angeles	2023	Annual	LDT1	Gasoline	Aggregated	Aggregated	323,318	11,785,010	1,422,834	4,580.93	0.15	0.17
Los Angeles	2023	Annual	LDT2	Diesel	Aggregated	Aggregated	4,736	207,450	22,903	76.38	0.00	0.01
Los Angeles	2023	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,558,893	64,432,894	7,331,380	25,992.47	0.29	0.50
Los Angeles	2023	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	86,566	2,058,404	357,950	685.26	0.00	0.00
Los Angeles	2023	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	309	7,382	1,279	2.46	0.00	0.00
Los Angeles	2023	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	11,316	271,382	46,790	90.42	0.00	0.00
							Totals	216,132,079.42		76,201.56	0.92	1.47
							Grams/Mile			320	0.00	0.01
							CO2 Equivalent			1	25	298
							CO2E g/mile			320	0.10	1.84
							Combined CO2E g/mile		322			

EMFAC2021 Emissions Inventory
Region Type: County
Region: Los Angeles
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdYr	Speed (miles/hr)	Population (vehicles)	VMT (miles/day)	Trips (trips/day)	CO2 (tons/day)	CH4 (tons/day)	N2O (tons/day)
Los Angeles	2028	Annual	LDA	Diesel	Aggregated	Aggregated	5,944	181,299	24,998	47.71	0.00	0.01
Los Angeles	2028	Annual	LDA	Gasoline	Aggregated	Aggregated	3,213,384	125,421,546	14,894,855	37,644.48	0.29	0.56
Los Angeles	2028	Annual	LDT1	Diesel	Aggregated	Aggregated	29	585	82	0.26	0.00	0.00
Los Angeles	2028	Annual	LDT1	Gasoline	Aggregated	Aggregated	301,279	10,938,459	1,329,539	3,927.64	0.08	0.11
Los Angeles	2028	Annual	LDT2	Diesel	Aggregated	Aggregated	5,918	247,792	28,317	84.62	0.00	0.01
Los Angeles	2028	Annual	LDT2	Gasoline	Aggregated	Aggregated	1,722,542	70,095,593	8,098,768	25,738.09	0.21	0.39
Los Angeles	2028	Annual	LDA	Plug-in Hybrid	Aggregated	Aggregated	114,381	2,303,255	472,964	763.04	0.00	0.00
Los Angeles	2028	Annual	LDT1	Plug-in Hybrid	Aggregated	Aggregated	1,428	28,830	5,904	9.56	0.00	0.00
Los Angeles	2028	Annual	LDT2	Plug-in Hybrid	Aggregated	Aggregated	24,232	483,151	100,200	160.19	0.00	0.00
							Totals	209,700,509.93		68,375.59	0.58	1.08
							Grams/Mile			296	0.00	0.00
							CO2 Equivalent			1	25	298
							CO2E g/mile			296	0.06	1.40
							Combined CO2E g/mile		297			

Radford Studio Center - GHG Analysis

SB100 - Renewable Portfolio Standards

Year	% RPS	RPS Reduction (%)	Carbon Intensity (lbs/MWh)
2022	35		567
2024	44	-20%	451
2027	52	-15%	382
2030	60	-13%	331
2036	65	-8%	305
2045	100	-35%	0

Year	Carbon Intensity (lbs/MWh)
2028	397
2023	504